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LATE OR TERTIARY MANIFESTATIONS OF YAWS*

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Little information is gained regarding the tertiary lesions of yaws from studying textbooks of tropical medicine. It is my purpose in this paper to describe the more common tertiary lesions encountered in this disease. I believe with Howard [1] that these tertiary manifestations are of the greatest importance; that they are mutilating and invaliding; and that they may last for years, thus predisposing the subject to the ravages of secondary diseases. Howard, speaking of tertiary manifestations, says:

> The question is obviously one of the greatest importance in tropical hygiene. Yaws is a widely spread disease and in some parts of the tropics it is almost universal. In its early stages it is a loathsome but not very severe or fatal complaint. If there is no tertiary stage, yaws is not responsible for much invaliding or mortality in the negro race. If, on the other hand, the alleged tertiary stage does occur, much suffering, disfigurement, crippling, and even death must be put to its account.

Late manifestations have been reported to be common in regions where yaws is found. In tropical countries, especially in Africa [1] and Fiji,[2] tertiary manifestations have been reported to be a common sequel of the disease. In our work at Parañaque,[3] where we studied carefully 229 cases with respect to the different manifestations of the disease, we found the lesions occurring in seventy-seven, or 33.62 per cent. of our patients, as shown in Table 1.

Table 1 shows that tertiary lesions occurring alone were found in 10.48 per cent. of the cases. It will also be noted that more tertiary lesions were found with the secondary manifestations than were tertiary lesions alone.

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1. Howard, A.: Tertiary Yaws, J. Trop. Med. **11**:197, 1908.

2. De Boissierre: Observations on Tinea Imbricata, Yaws and the Treatment of Dysentery, J. Trop. Med. **6**:371, 1908.

3. Gutierrez, P. D.: Yaws: Its Manifestations and Treatment by Neo-Arsphenamin, Arch. Dermat. & Syph. **6**:265 (Sept.) 1922.

The tabulation given is misleading in that it does not include all cases of "keratoderma" as they presented themselves; neither are the cases of gangosa and juxta-articular nodules included. Keratoderma was a common complaint among the inhabitants of Parañaque, where these patients were treated, but as the campaign was primarily against the disease at its infectious stage, few were given treatment. Only one case of a beginning gangosa was observed, and no patients with juxta-articular nodules presented themselves for treatment, not because patients with juxta-articular nodules were not to be found in the town, as later observations prove the contrary, but probably because the people did not see any connection between yaws and these nodules.

Table 2 shows the incidence of tertiary manifestations. It is realized that the number of patients herewith presented is too small and incomplete to warrant drawing final conclusions as to the frequency of

TABLE 1.—*Relations Between the Appearance of Primary, Secondary and Tertiary Lesions*

	Cases	Per cent.
Primary	10	4.36
Secondary	90	39.30
Tertiary	24	10.48
Combined lesions		
Primary and secondary	52	22.70
Secondary and tertiary	39	17.03
Primary, secondary and tertiary	14	6.11
Total	229	

TABLE 2.—*Incidence of Tertiary Manifestations*

	Cases	Per cent.
Periostitis	7	30.43
Gummas	3	13.04
Keratoderma	10	43.47
Combined lesions		
Periostitis and gummas	2	8.69
Periostitis and keratoderma	1	4.34
Total	23	

different tertiary manifestations of the disease; but, even in these few cases, it will be seen that keratoderma palmaris et plantaris sulcatum occurs rather frequently. This finding is corroborated by our experience at Ilocos Norte, Camarines Sur and in the Catanduanes, where we found keratoderma to be a common sequel of yaws. In Catanduanes, out of 973 patients treated, 31, or 3.18 per cent., showed primary lesions; 217, or 22.30 per cent., showed secondaries; 719, or 73.89 per cent., had keratodermas, and 6, or 0.60 per cent., showed other tertiary manifestations.

TERTIARY LESIONS OF THE SKIN

Tertiary or late manifestations of the skin may be divided into "tubercular or nodular" and "gummatous." Howard [1] has encountered forms intermediate between these two, but we believe these to be cases of nodular lesions that have not broken down (Fig. 1).

Fig. 1.—Serpiginous nodules.

Fig. 2.—Serpiginous nodules with ulcerations and cicatrix formation.

Tubercular or Nodular Late Lesions.—Tubercular or nodular serpiginous lesions of yaws may appear soon after the secondary manifestations have disappeared, or they may be observed years after them. The lesions usually involve limited portions of the skin, but they may be observed in several places. The sites of election are usually the trunk, especially the back (Fig. 2), and the head and neck, but they may be found anywhere. The lesions occur in groups, often in circular patches.

Fig. 3.—Serpiginous nodules showing breaking down of nodules.

The individual lesions are papules varying in size from that of a pinhead to that of a split pea, and are frequently surrounded by an inflammatory halo. The color is dark red. The papules can be felt deeply embedded in the corium and adherent to the skin above. They are firm and sharply circumscribed. In many instances, the nodules break down and produce punched-out ulcers (Fig. 3). The lesions advance peripherally, leaving behind them supple, thin scars.

Gummas.—Gummas occur in limited numbers in localized portions of the body, usually on an extremity, but they may be found on the head, the trunk and elsewwhere (Fig. 4). The lesions are firm, circumscribed, indolently inflamed nodules in the corium and subcutaneous tissue. They increase in size until they become as large, or larger, than an olive, when the center breaks down. The resulting ulcer, like the foregoing lesion, has perpendicular walls, with an uneven base. The development of the gummas is comparatively painless. Eventually the ulcer heals, usually leaving supple, thin scars, but in some cases corrugated, thick scar tissue which, if present around a joint, may impair its movements.

Other gummatous-like swellings have been described; we have not had the opportunity of observing these. Montague [4] reports indurated masses occurring in the muscles. He says:

Fig. 4.—Gummas.

The muscles were firmly bound together, and the individual muscles were found to be greatly indurated and stiffened. The mass had an ill-defined margin about five inches in diameter, and had been present for about six months. It disappeared in two months.

From the foregoing description, it will be seen that the late manifestations of yaws are indistinguishable from late syphilitic lesions. In fact, physicians arriving in the tropics for the first time have mistaken these lesions for syphilis.[5]

4. Montague, A. H.: J. Trop. Med. **6**:348, 1903.

5. Howard, R.: The Importance of Tertiary Yaws, J. Trop. Med. **18**:25, 1915.

These particular tertiary manifestations have rightly received more attention than other late manifestations of the disease. Once present, they last for years, leaving their victims scarred and mutilated. Howard [5] and Boissierre [6] even believe that they may be blamed for some of the deaths in localities where yaws is found.

Fig. 5.—Bone lesions in a child, aged 12 years.

BONE LESIONS

We have not had the opportunity of observing these lesions in their incipiency and shall not therefore attempt to describe the early manifestations. There are two forms of bone lesions. In one, there are localized nodes on the bone (Fig. 5), and in the other, there is a diffuse osteitis which involves the whole bone.[6] The bones frequently affected are the tibia, the radius and the ulna; but the clavicle, the ribs, the sternum and, rarely, the calvarium have also been attacked (Fig. 6).

6. De Boissierre: Filiariasis and Yaws in Fiji, J. Trop. Med. **7**:179, 1904.

The nodular form (Fig. 5), being the commoner of the two, occurs as localized inflammations on the surface of the bone. The nodes are at first localized on the periosteum, but later involve the soft tissues above and then soften and open through the skin. The periosteal inflammation, which, according to Maul,[7] is a real rarefaction of the bone and a destruction of the periosteum, is very painful when it occurs acutely; but when chronic, it causes only dull aching pains felt deep in the bone. Different portions of the bone may be affected, and these heal in time, leaving the shaft of the bone irregularly depressed and the skin over it scarred and drawn tightly over the affected bone.

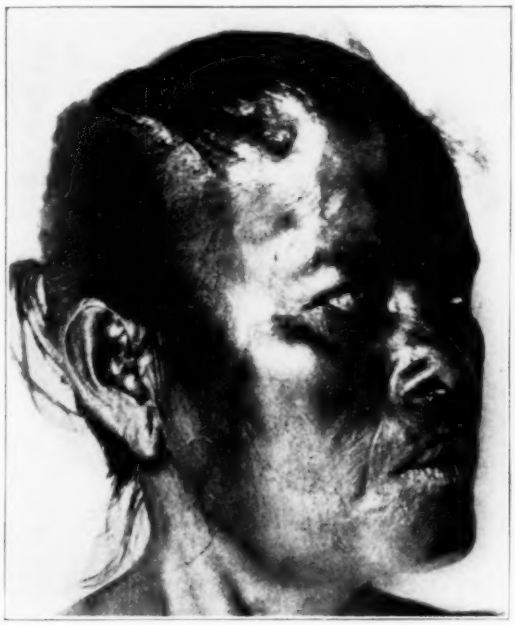

Fig. 6.—Lesions on the frontal bone.

When the whole bone is affected, as in the diffuse type, the whole shaft is thickened, including the periosteum; so that, if the tibia is affected, it is bowed anteriorly, much in the same manner as the bowing found in congenital syphilis.

When the destruction of the bone occurs near the epiphysis, the growth of the bone is interfered with, and shortening of that particular bone with its accompanying deformities results.

Synovial inflammations have been observed to cause effusions of the joints affected, and this may be followed by ankylosis. More com-

7. Maul, H. G.: Bone and Joint Lesions of Yaws, With Roentgen Ray Findings in Twenty Cases, Philippine J. Sc. **13**:63 (March) 1918.

monly, however, the lesion is on the articular surface of the joint, causing rarefaction of the articular surface of the bone. Bone lesions may appear from six months to nine years after the appearance of the primary lesion.

KERATODERMA PALMARIS ET PLANTARIS SULCATUM (CASTELLANI)[8]

This condition has been described under several names. Castellani[9] calls it "Peculiar Pitting of the Hands and Feet." Howard[5] calls it "Foot Yaws (Mitembo)." I described it under the name of "keratosis palmaris et plantaris."[10] An advanced state of this condition was called "melung (beta)" by Castellani.[11] Keratoma plantare sulcatum is one of the names given to this condition by Castellani. Apparently, he was the first to call attention to this peculiar condition of the feet, although he did not know the etiology at the time. As stated above, various names have been proposed for the condition, but it is believed that Castellani's is the most appropriate, aside from the fact that it is the first name proposed. In accordance with Chalmers'[12] and Unna's[13] classification, it is proposed to change the first word into keratoderma. As not only the soles but also the hands participate in the process, it is proposed to add palmaris to the designation.

This interesting late manifestation of the disease is the commonest tertiary lesion encountered in a locality where the disease prevails, although its frequency has not been sufficiently emphasized by physicians studying the disease. In our campaigns, both at Parañaque and at Ilocos Norte, it is the commonest complaint presented by persons who have had yaws. In the latter place, we encountered 431 cases of this condition in the first 658 patients examined; and at Catanduanes we found it in 73.89 per cent. of the cases.

In an article regarding these tertiary manifestations,[10] I stated that only two references bearing on these lesions could be found. On a closer study of the literature, however, other references were found. McCarthy[14] mentions a chronic thickening and fissuring of the skin of

8. Castellani and Chalmers: Keratoma Plantare Sulcatum. Manual of Tropical Medicine, Ed. 3, New York, William Wood & Co., 1920, p. 2258.

9. Castellani and Chalmers: Ibid, p. 1550.

10. Gutierrez, P. D.: Keratosis Palmaris et Plantaris Due to Yaws, Arch. Dermat. & Syph. **8**:382 (Sept.) 1923.

11. Castellani and Chalmers: Manual of Tropical Medicine, Ed. 3, p. 2229, 1920.

12. Chalmers, A. J., and Kamar, A.: Keratodermia Punctata, J. Trop. Med. **20**:121 (June 1) 1917.

13. Unna, P. G.: The Histopathology of the Diseases of the Skin, translated by Walker, Edinburgh, 1896, p. 860.

14. McCarthy, P. A.: Report on the Prevalence of Yaws in the Lower Chindwin District, Upper Burma, India M. Gaz. **41**:53, 1906.

the palms. Boissiere [6] speaks of "soki," a local name for small granulomas which often affect the soles and occasionally are seen in the hands. This condition is common, and may appear even from fifty to sixty years or more after a patient has suffered from secondary yaws. Besides this, fissures are also encountered on the feet and hands. Howard [5] says that even if the subject is apparently free from other lesions, yet "there is the peristence of the chronic condition of the soles of the feet known as foot yaws (mitembo)." Moss and Bigelow [15] describe clavus-like thickening of the soles, which the natives of Santo Domingo call "clavus," because of the sensation it produces of walking on nails.

I believe this is the same condition spoken of by Castellani and Chalmers [10] as peculiar pitting of the hands, and the late stage of this same condition has been described by these authors in a separate chapter under the name melung (beta).[11]

Fig. 7.—Keratoderma plantaris sulcatum showing hyperkeratosis and fissures.

I described two forms of this keratosis. In one, there is a gradual thickening of the horny layer, generally preceded by hyperpigmentation. The whole palm or sole is thus involved, the digits are hidebound, and motion is impaired and difficult. The skin becomes rough and dry, and deep and painful fissures are apt to form (Fig. 7). At the periphery of the thickened area, there is hyperpigmentation. The hyperkeratosis is usually found simultaneously on both hands and feet, or it may be observed only on the hands or on the feet. It may, however, start on one member alone and be localized there for months before it involves the other extremities.

15. Moss, W. L., and Bigelow, G. H.: Yaws, an Analysis of 1,046 Cases in the Dominican Republic, Bull. Johns Hopkins Hosp. **33**:43 (Feb.) 1922.

The other form starts as isolated cornlike hyperkeratosis embedded in a thickened horny layer. These cornlike hardenings are about the size of the point of a lead pencil. They are easily detached and even fall off spontaneously, leaving small pit marks scattered over the thickened palm (Fig. 8). The condition is painful on pressure, as when the patient walks. The pain is likened by patients to the sensation produced by walking on the tips of blunt nails.

The condition may appear directly after the secondary manifestations have healed, or it may appear twenty years after they have disappeared.

Fig. 8.—Keratoderma plantaris sulcatum showing pits of cornlike bodies.

In the meantime, all manifestations of the disease may have ceased, and the person is apparently well. When once manifested, the condition is progressive and lasts throughout life. As the disease progresses, it involves the dorsi of the hands and feet and may involve even the skin of the wrist and of the shins as far as the elbows and knees (Fig. 9). As a final stage of the condition, the skin becomes depigmented (Fig. 10), and when the condition has reached this stage, the affected skin frequently becomes thinner, approaching its normal texture. This stage has been described by Castellani and Chalmers as melung (beta). There is usually a slight itchy sensation of the affected parts.

The Wassermann Reaction.—The Wassermann reaction was studied in sixty-three of our dispensary cases. We found it to be positive in 43, or 68.24 per cent., and negative in 20, or 31.74 per cent. These sixty-three patients, with the exception of four, gave histories of having had yaws. Three of them gave a positive Wassermann reaction, and in one the reaction was negative.

Fig. 9.—Later manifestations of keratoderma plantaris sulcatum. Note condition extending up to wrist and knees.

Differential Diagnosis.—This condition has to be differentiated from several conditions, the clinical description of which, because of their rarity, is still obscure. Chalmers [12] differentiates his keratoderma punctatum from the following diseases:

1. Arsenical keratosis.
2. Porokeratosis mibelli.
3. Syphilitic hyperkeratosis.
4. Hyperkeratosis found in lichen planus.

5. Hyperkeratosis found in Darier's diseases.

6. Hyperkeratosis of Emery, Gaston and Nicholas (verrues familiales hereditaires avec dyskeratoses systemateuses).

7. Linear nevus.

We do not include Chalmers' case of keratoderma punctatum among the diseases to be differentiated, because we believe that the disease he described is the same condition we are now describing. While porokeratosis mibelli, punctate keratosis, and similar conditions with which Chalmers seems to classify his case appear to be rare, Chalmers himself admits that the case he reported was not the only one in the locality.

The differentiation between the aforementioned diseases and keratoderma palmaris et plantaris sulcatum need only be gone over hurriedly,

Fig. 10.—Late stage of keratoderma plantaris sulcatum showing depigmentation.

since the former conditions are rare. The differentiation between keratoderma punctatum and keratoderma palmaris et plantaris sulcatum seems easy. Sweitzer,[16] who collected all the cases up to date, states that the condition is rare, and some of the cases included in this category belong to one or other of the diseases mentioned in the foregoing. He and MacLeod[17] are of the opinion that the disease is congenital.

From the other conditions listed, little can be added to Chalmers'[12] excellent article. These conditions are well known, and typical lesions

16. Sweitzer, S. E.: Keratoderma Punctata, Arch. Dermat. & Syph. **8**:687 (Nov.) 1923.

17. MacLeod, J. M. H.: In the Discussion of Sweitzer's Cases, Arch. Dermat. & Syph. **8**:694 (Nov.) 1923.

should offer little difficulty in differentiation. Chalmers differentiates them from his keratoderma punctatum by the cupola-like bodies present in his case and by the depressions left by these bodies. Chalmers [18] further differentiates his case from keratoma plantaris sulcatum by the fact that the patient "was not then suffering and had never been known to suffer from yaws;" which statement may be taken for what it is worth.

The main thing to remember in the differential diagnosis is that keratoderma palmaris et plantaris sulcatum occurs usually during the adult age, and that it is an acquired disease. There is a history of the person having contracted yaws, and that he has lived or is living in the Tropics. The Wassermann reaction is positive.

The differentiation between syphilis and this condition may offer difficulties on account of the positive Wassermann reaction. I have not had access to Brocq's [19] article, so it is impossible for me to say how frequently this form of keratosis occurs in syphilis. The condition must be rare, since no mention of this particular form of keratosis is made by Abraham and Davis or in other textbooks [20] on syphilis. The usual keratosis presented in syphilis is altogether different. The family history, if the subject is married, will help to determine the diagnosis, since yaws is never transmitted to the offspring.

Treatment.—The condition yields readily to arsphenamin preparations, and in the majority of cases the cutaneous lesions clear up after two injections given too weeks apart. The skin becomes thinner, the scaling disappears, and the skin becomes soft and pliable. Depigmentation when present, however, especially in cases of long standing, is not ameliorated in most cases. If the depigmentation occurs only in patches, the pigment will probably return, and the skin will regain its normal color, as observed in some of our cases.

GANGOSA, RHINOPHARYNGITIS MUTILANS (LEYS [21])

This is a somewhat rare manifestation of the disease. A review of the literature gives this tertiary manifestation of yaws a doubtful etiology. Some workers believe that it is due to syphilis,[22] while others

18. Chalmers, A. J., and Kamar, A.: Further Notes on Keratoderma Punctata, J. Trop. Med. **20**:218 (Oct. 1) 1917.

19. Brocq, quoted by Galloway, J.: Brit. J. Dermat. & Syph. **30**:123 (July-Sept.) 1918.

20. Power and Murphy: A System of Syphilis, Ed. 2, New York, Oxford University Press **4**:80, 1914.

21. Leys, J. F.: Rhinopharyngitis Mutilans (Destructive Ulcerous Rhinopharyngitis): A Problem in Tropical Pathology, J. Trop. Med. **9**:47, 1906.

22. Garrison: Gangosa in Guam, Bull. Manila M. Soc. **2**:265, 1910. Odell, H. E.: Is Gangosa a Form of Syphilis? U. S. Nav. M. Bull. **5**:430, 1911.

believe that it is due to yaws. Still others [23] believe that it is a disease per se. We found several cases of this condition, although we have not encountered it as commonly as it was found in Guam. Our patients were observed in the field and could not be studied thoroughly, but at the Philippine General Hospital, the department of eye, ear, nose and throat has encountered several examples of this condition. The cases have been carefully studied and blood tests have been performed in most of them.

That this condition is a sequel of yaws, I believe there can be no doubt. The works of Halton,[24] Schmitter,[25] Kerr,[26] Dijke, Bakker and Hoesen,[27] van Driel,[28] and others, preclude all doubts as to its relation to yaws. Kerr [26] reports 315 cases with 83 per cent. showing positive Wassermann reactions. Of these 315 cases, however, only sixty-three were true cases of gangosa, forty-five of which, or 70.95 per cent., gave positive Wassermann reactions. Of the sixty-three cases of true gangosa, fifty-three gave histories of having had yaws.

Our cases show that twenty out of twenty-five give histories of yaws, and of nineteen cases in which the Wassermann reaction was performed, fourteen, or 74.1 per cent., gave a positive reaction.

Little can be added to the excellent descriptions in the literature, especially those by naval officers stationed in Guam, who have had the opportunity of studying the disease on a large scale and of watching their patients from the early stages. The disease starts in either the soft palate, the pillars, the pharynx, the nose or the nasolabial sulcus. In any of these places it commences as a painful shallow ulceration. The ulcer is at first superficial, covered with a thin yellow pellicle of necrotic tissue. In the nose, this condition is accompanied by great swelling of the tissues which obstructs the nasal passages. This pellicle breaks down and leaves an ulceration which enlarges and involves the adjacent tissues rapidly, so that in seven days there is marked ulceration of the soft palate. The ulceration progresses and involves the hard palate and nose, leaving the upper lip as a bridge across the gaping cavity which

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23. Mink, O. J., and McLean, N. F.: Gangosa, J. A. M. A. **47**:1166, 1906. Breinl: Ann. Trop. Med. **4**, 1915.

24. Halton, E. P.: Etiology of Gangosa, Based Upon Compliment Fixation, U. S. Nav. M. Bull. **6**:190, 1912.

25. Schmitter, F.: The Etiology of Gangosa and Its Relation to Papulocircinate Yaws, J. Trop. Med. **24**:229 (Sept.) 1921.

26. Kerr, W. M.: Gangosa, U. S. Nav. M. Bull. **7**:188, 1913.

27. Dijke, Bakker, and Hoesen: On the Etiology of Rhinopharyngitis Mutilans, Tr. of the Fourth Congress, Far Eastern Association Trop. Med. **2**:129, 1921.

28. Van Driel, B. M.: Rhinopharyngitis Mutilans, Nederlandsch Tijdschr. v. Geneesk. **1**:1604 (April) 1922.

was originally the nose and roof of the mouth (Fig. 11). In most cases, the condition is arrested at this stage, but in others the skin surrounding the nose and eyes is involved, producing the most hideous deformity. The condition may also be arrested at any stage; we sometimes see patients who have an ulceration of the soft palate without any other lesion. These are, however, rare, the usual course of the process being the involvement of the soft and hard palate and the nose. The course of gangosa runs, according to Mink and McLean,[28] two years.

Fig. 11.—Gangosa; rhinopharyngitis mutilans.

NODOSITES JUXTA-ARTICULAIRES, LUTZ-JEANSELME

Although the exact etiology of these tumors has not been determined, from the few cases we have had, we are inclined to believe that the tumors are due to yaws. Attention was first called to these tumors, according to Silva,[29] by Lutz, who published his observations in the *Monatshefte für Dermatologie* in 1892. Eight years later (1900), Sir William MacGregor [30] observed similar tumors in natives of British New

29. Silva, F.: Lutz-Jeanselme Juxta Articular Nodes, Brazil Med. **34**:687 (Oct. 16) 1920. It is to be regretted that neither Silva's nor Lutz's article can be obtained in our library. Silva's article is abstracted in the J. A. M. A. **76**:345, 1921.

30. MacGregor, W.: An Address on Some Problems of Tropical Medicine, Lancet **2**:1060, 1900.

Guinea. Subsequently they have been described by Steiner,[31] Jeanselme [32] (who gave them the name by which they are now known), Fontoynont and Carougeau,[33] and others.

The cause of these interesting tumors has been laid to a nocardia, which Fontoynont and Carougeau isolated from a case of juxta-articular nodules, and subsequently named "discomyces Carougeau." These observers obtained the specimen from a nodule on a native of Madagascar. Injections of the isolated organisms into an animal, however, proved negative. In spite of this, the fungus is still thought by some to be the cause of these tumors. Currie and Hollman [34] isolated a fungus from a case found in a leper in Hawaii, which they believe to be the cause of these tumors and which they believed to be similar to the fungus described by Fontoynont and Carougeau. Ouzilleau [35] and Brumpt [36] are of the opinion that the tumors are due to a filaria which is a common cause of subcutaneous nodules in Africa. Mouchet and Dubois [37] and, later, Davey [38] believe that the tumors are due to yaws. Davey states that eighty of his patients gave histories of yaws. Clapier [39] supports this view. Van Dijke and Oudendal [40] found that thirty-two of the thirty-six patients examined by them, suffering from these tumors, showed symptoms of yaws. These authors found a spirochete which was indistinguishable from *Spirochaeta pallida*. On reading their paper, however, the impression is gained that these authors are undecided as to the exact etiology of the tumors, in spite of the seeming relationship

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31. Steiner, L.: Ueber Multiple Subkutane Fibrose Geschwulste bei den Malayen, Arch. F. Schiff. u. Trop. Hygiene **8**:156, 1904.

32. Jeanselme, E.: Compt. rend. de la Soc. de médicin et d'hygiene coloniales, Paris, Professor Blanchard, 1904.

33. Fontoynont and Carougeau: Les nodosites juxta-articulaires. Mycose de au discomuces Carougeau, Arch. de parasit. **13**:538, 1909.

34. Currie, D. A., and Hollman, H. T.: The Histology and Bacteriological Investigation of Juxta-Articular Nodules in a Leper, New Orleans M. & S. J. **71**:385 (March) 1919.

35. Ouzilleau: L'elephantiasis et les filiariasis, Ann. d'hygiene et med., Colon **16**:606, 1913.

36. Brumpt, quoted by Davey: Ann. Trop. Med. **9**:421, 1915.

37. Mouchet, R., and Dubois, A.: Le traitement du pian et de la syphilis par le salvarsan dans le practique indigene, Bull. Soc. Path. Exot. **6**:14, 1913.

38. Davey, J. B.: The Etiology of Juxta-Articular Subcutaneous Nodules, Ann. Trop. Med. **9**:421, 1915.

39. Clapier, P.: Nodosites juxta-articulaires et treponemes, Bull. Soc. de path. exot. **16**:553, 1923.

40. Van Dijke, M. J., and Oudendal, A. J. F.: Distribution, Histology, Etiology of the Nodosites Juxta-articulaires among Malay People, Rep. Dutch Indian Med. Service, 1923, part 2, p. 143.

to yaws. On the other hand, Currie and Hollman [34] do not believe that these tumors can be due to yaws. They say: "Yaws is never found in Hawaii." Poupelain,[41] Montel,[42] Gougerot, Burnier and Bonin,[43] Picout-Laforest,[44] Argaud,[45] and Montenegro [46] all believe that the tumors are syphilitic in nature. Mendelson,[47] on the other hand, believes that the tumors are due to some metabolic process at present undetermined.

As these tumors are rarely complained of, except for the disfigurement they cause, we could follow up only a few cases. These few,

Fig. 12.—Nodosites juxta-articulaires.

41. Poupelain: Les nodosites juxta-articulaires origine probablement syphilitique, Bull. Soc. de path. exot. **13**:548, 1920.

42. Montel, L. R.: Nodosites juxta-articulaires chez les Annamites. Traitement par le novarsenobenzol, Bull. Soc. de path. exot. **13**:554, 1920.

43. Gougerot, Burnier and Bonin: Nodosites juxta-articulaires et syphilis, Ann. d. mal. ven. **15**:313, 1920.

44. Picout-Laforest, A.: Un cas de nodosites juxta-articulaires de origin syphilitique chez un indigene du Sahara, Arch. de l'inst. Pasteur **3**:143, 1923.

45. Argaud, R., and Xenon, J.: Etude histologique d' un cas de nodosites juxta-articulaires, Arch. de l'inst. Pasteur **2**:465, 1922.

46. Montenegro, J.: Etopatogenia des nodosidades juxta-articulares, Bull. Soc. med. chir. Paolo-Brazil. **5**:199, 1922.

47. Mendelson, R. W.: Xanthoma Tropicum. (Juxta-articular Nodules), J. Trop. Med. **26**:181 (June) 1923.

however, seemed interesting enough to warrant their report in the hope that our findings may contribute toward determining the etiology of these tumors. Altogether, we were able to gather forty cases, twenty in the field and twenty in the hospital. The twenty field patients all gave histories of having had yaws, and the tumors disappeared after the administration of arsphenamin. The twenty hospital patients, with one exception, also gave histories of having had yaws. The Wassermann reaction was positive in sixteen of twenty cases tested, or 83 per cent.

Little can be added to the excellent descriptions of these tumors by Jeanselme,[48] Neveux,[49] and others. The tumors are found more commonly in persons past middle age. They may, however, be observed in younger persons, as we have observed a case occurring in a child, aged 11 years. Jeanselme believes that the tumors are more common in males than in females, which we believe is due to the fact that yaws occurs oftener in males than in females. The tumors have a predilection for the extremities and the area near joints (Fig. 12). The tumors are grouped about the ankles, elbows, knees and hip joints. They may be of different sizes, and when developed become as large as a hen's egg or larger. The tumors are frequently lobulated, hard and cartilagenous. They are adherent neither to the periosteum nor to the skin above.

DIFFERENTIAL DIAGNOSIS

The only tumors found about the joints of the elbows and knees which closely simulate these nodosities are the subcutaneous fibroid syphilomas of Weber.[50] These are rare manifestations of syphilis in its later stages. Their location, consistency and development are exactly those of juxta-articular nodules, so that one cannot differentiate one disease from the other by mere clinical examination. The history, residence of the person and histologic picture of the tumors must be taken into account before diagnosis can be made.

TREATMENT

In all of our patients the condition yielded, though slowly, to treatment with neo-arsphenamin. After the first injection, there was softening of the masses, but little reduction in their sizes; on subsequent injection, however, there was a marked diminution in their volume.

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48. Jeanselme, E.: Des nodosites juxta-articulaires observes les indigenes de la Presquile Indo-Chinoise, Rev. de méd. et d'hyg. Trop., Paris **2**:421, 1905.

49. Neveux, L.: Le Narinde. Fibromatouse sous cutanee des Tonconleurs du Bordon Senegal, Rev. de méd. et d'hyg. trop., Paris **4**:183, 1907,

50. Fox, H.: Subcutaneous Fibroid Syphilomas of Elbows and Knees; A Rare Manifestation of Syphilis, Arch. Dermat. & Syph. **5**:198 (Feb.) 1922.

RECKLINGHAUSEN'S DISEASE

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With the opening up of the field of endocrinology, many diseases of unknown etiology began to be attributed to endocrine dysfunction. Recklinghausen's disease is a good example of the foregoing endocrine tendency in dermatology. Within the last few years, some dermatologists have gone so far as to claim that every case of Recklinghausen's disease is due to endocrine dysfunction. A desire to throw further light on the etiology of this disease prompted this study.

HISTORICAL

Long before Recklinghausen described the disease bearing his name, Smith, in 1849, described the gross anatomic characteristics, and pointed out that these fibromas arose from nerve tissue. Virchow, in 1863, however, claimed that the fibromas were of connective tissue origin. It remained for Recklinghausen, by finding degenerated nerve fibers in the fibromas, to establish the fact that the fibromas arose from the connective tissue of the cutaneous nerves.

ETIOLOGY

There are two theories concerning the etiology of Recklinghausen's disease; one explains this disease as a congenital embryonal disturbance between the ectoderm and its innervations; the other attributes this disease to a disturbance in some of the endocrine glands.

SYMPTOMATOLOGY

Recklinghausen's disease or neurofibromatosis is a constitutional disturbance affecting the whole nervous system, and therefore presents a varied symptomatology. The most common findings are the cutaneous tumors. These may vary in size from that of a millet seed to 7 pounds (3.2 kg.) in weight, as found in one of my cases. These tumors may vary in number from one to very many (4,503 were found by Hashimoto in a Japanese patient). In some parts of the body, the tumors occasionally assume elephantiasis-like formations. These tumors, although usually found at birth, in a certain number of cases may be so small and few at birth and early childhood as to escape notice, but during such physiologic periods as puberty, pregnancy, lactation or menopause, or following infectious diseases, begin to increase in size and number.

Of the cutaneous manifestations next in frequency are various anomalies of pigment. These occur either in the form of freckles or

in confluent areas. In a small number of patients, the whole skin may become dark brown, as in one of my patients (Case 3) who was thought to be of Mexican origin.

Next in frequency to the cutaneous manifestations are disturbances in the nervous system. These, I believe, can be classified as psychic, sympathetic and sensorimotor. The psychic disturbances usually consist of feeblemindedness, idiocy, dulness and apathy. My patients, however, were all of normal intelligence, but all showed unusual irritability, quarrelsomeness and marked fatigability. The sympathetic nervous disturbances consist of tachycardias, tremors, sweating, various paresthesias and menstrual disturbances. The latter vary from slight irregularities to complete absence. Sensorimotor disturbances consist of neuralgic pains as well as of muscle weakness.

Besides the cutaneous and nervous disturbances, a number of these patients reveal various osseous anomalies, such as a scoliosis of the spine and atrophy or cysts of the long bones. Furthermore, any organ in the body of a patient with Recklinghausen's disease may be the seat of a neurofibroma and thus give symptoms pertaining to disturbances of the organ.

REPORT OF CASES

Case 1.—Mrs. G. W., aged 44, came to Kansas City General Hospital complaining of stabbing pain in the lower lip, weakness, marked nervousness, shortness of breath and cutaneous tumors. Her family history was negative. She had had the common childhood diseases. She had always been "nervous," and had always suffered from headaches. Her appetite had always been poor. At the age of 3, tumors were noticed all over the body. Menstruation started at 13, and had always been irregular—she menstruated every two or three months. Several menstrual periods lasted five months without interruption. She had been married for twenty-eight years. She had three children living and well; at the age of 36, she had had two miscarriages.

Physical Examination.—The patient had normal intelligence. She was very quarrelsome, and was unable to get along with her family or neighbors. She was irritable and constantly tired. Her weight was 102½ pounds (46 kg.). Her height was 4 ft., 10 inches. The head was normal, except for fibromas of the scalp. She had no exophthalmos and no muscle disturbances. The pupils were equal. They reacted to light and in accommodation. The nose and throat were normal. There was no glandular enlargement of the neck. The thyroid was not palpable. The lungs were normal. The point of maximum impulse of the heart was the sixth interspace. The left border was 2 fingerbreadths beyond the nipple line. A soft systolic murmur at the apex was not transmitted. The heart rate was 94. The blood pressure was systolic 150, diastolic 80. The abdomen was normal. The uterus was of normal shape, size and position. The extremities were normal except for markedly exaggerated reflexes. There were no pathologic reflexes.

The skin of the face, neck and arms showed a uniform dark brown pigment. Over the chest and back the pigment was in the form of freckles as well confluent areas. The whole body was covered with soft pendulous tumors, the largest of which weighed 7 pounds.

Laboratory Examination.—Laboratory findings were: hemoglobin, 50 per cent.; red blood cells, 4,100,000; white blood cells, 6,000; polymorphonuclears, 70 per cent.; small lymphocytes, 22 per cent.; large lymphocytes, 4 per cent.; basophils, 2 per cent. The Wassermann test was negative. There was a trace of sugar and albumin in the urine.

Blood Chemistry.—There were 22 mg. of nonprotein nitrogen per hundred cubic centimeters of blood, 13 mg. of urea nitrogen, 2.92 mg. of uric acid and

Fig. 1 (Case 1).—Soft, pendulous tumors on body.

125 mg. of sugar. The sugar tolerance test after fasting revealed 125 mg. of sugar; thirty minutes after the ingestion of glucose, 161 mg.; sixty minutes after the ingestion of glucose, 200 mg.; one hundred and twenty minutes after ingestion of glucose, 143 mg. The urine contained 0.5 per cent. of sugar at the end of the first hour and 0.38 per cent. at the end of two hours. The basal metabolism was normal.

A roentgenogram of the skull revealed no changes in the sella turcica.

A section of one of the cutaneous tumors showed fibrous tissue with a few nerve fibers.

Experimental Work.—Having thus found no evidence of endocrine disturbance, various products were next tried.

Epinephrin chlorid, 1:1,000 solution, was administered hypodermically in 1 c.c. doses, three times a week for one month. Since these injections invariably produced a tremor of the whole body, profuse sweats, marked headache and profound prostration, they were discontinued. She was then given daily injections of corpus luteum and whole ovary for a few weeks. This was followed by corpus luteum and thyroid for another few weeks. In spite of all the foregoing medication, the patient failed to show the slightest improvement.

Case 2.—This case is interesting from two standpoints: (1) The patient is the son of the foregoing patient, and thus brings out the direct hereditary nature of Recklinghausen's disease. (2) This boy presented a tumor of the forearm, which makes the second case so far reported in the literature.

Eichenlaub,[1] from Hazen's clinic, was the first to report a similar tumor. Dr. Richard Sutton confirmed the rarity of this tumor.

The patient was 24 years old, the youngest in the family. He was normal at birth, except for the tumor on the forearm. His development had been characterized by nervousness, irritability, quarrelsomeness, fatigue, headache and backache.

Physical Examination.—This revealed a boy of normal intelligence, but highly excitable and irritable. His face revealed marked asymmetry. Double pterygium was present. He had an extremely high palate. Marked kyphosis was present. The penis and testicles were well developed. The hair was of feminine distribution. He had no axillary hair. The reflexes were everywhere exaggerated.

The whole body was covered with small, soft fibromas, mostly the size of a pea. The face and neck revealed uniform dark brown pigment. The rest of the body showed pigment in the form of freckles. From the lower third of the right arm down to the wrist there was a tumor of the color of port wine, pendulous, lobulated and corrugated, having a doughy consistency.

Laboratory Examination.—Blood examination revealed: hemoglobin, 95 per cent.; red blood cells, 4,500,000; white blood cells, 8,000. The Wassermann test and urinalysis were negative. Blood chemistry reavealed: nonprotein nitrogen, 20 mg.; urea nitrogen, 14 mg.; uric acid, 2.5 mg.; sugar 0.9 mg. per hundred cubic centimeters.

Section of the tumor from the arm revealed a myxofibroma.

Eichenlaub[1] thought that because his patient had no manifestations of Recklinghausen's disease that the tumor was a myxofibroma or probable linear nevus. My patient, having a tumor of the same distribution, color and consistency as Eichenlaub's, also had generalized neurofibromatosis. Since patients with Recklinghausen's disease occasionally show elephantiasis-like formations, I believe that this tumor is a localized elephantiasis, the fibrous tissue of which has degenerated into myxomatous tissue. The name applied to this tumor should be elephantiasis neuromatosa, as suggested by Harbitz.

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1. Eichenlaub, F. J.: Fibromyxoma—Probably Linear Nevus, Arch. Dermat. & Syph. **3**:151 (Feb.) 1921.

CASE 3.—This patient's condition is instructive from the standpoint of various diseases that may be associated with Recklinghausen's disease and which are usually attributed to the skin anomaly. Such patients are frequently dismissed with the idea that whatever symptoms they may have are due to their skin anomaly, and that there is therefore nothing to be done for them.

A young woman, aged 20, came to the Kansas City General Hospital complaining of constant pain over the lower right side of the abdomen, marked nervousness and generalized neurofibromatosis. Her abdominal pain was attributed to Recklinghausen's disease, and she was therefore referred to a dermatologist. Her father died of "dropsy" at the age of 61. Her mother

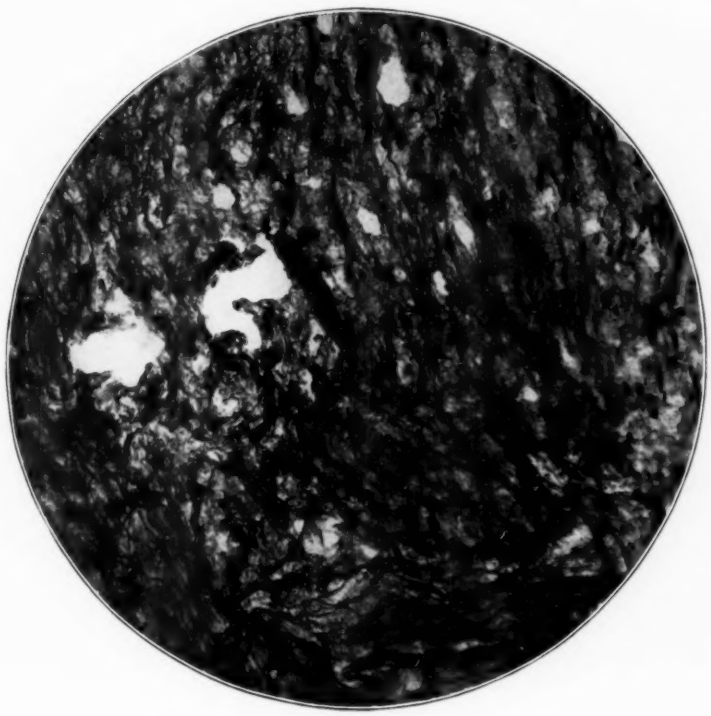

Fig. 2 (Case 2).—Myofibroma of arm.

was living and well. She had five sisters and two brothers living and well, and two brothers died at the age of 2 weeks. (She did not know much about her family.)

She had had a number of attacks of acute tonsillitis, marked nervousness and fatigability. Her menses began at the age of 17. They had always been regular and normal. She had been married for two years, and had had two children, both of whom had died, one of diarrhea, one of abscess on the head. Her present illness started with pain in the right side six weeks prior to her coming to the dispensary. This pain was aggravated by standing as well as by fatigue. She believed that she had had cutaneous tumors all her life.

Phyiscal Examination.—The patient showed a normal intelligence, but irritability, quarrelsomeness and constant fatigue. She weighed 107 pounds

(48.5 kg.), and was 4 ft., 11 inches tall. Physical examination was negative, except for tenderness over the right lower quadrant, and the skin manifestations. These consisted of a uniform, dark brown pigment all over the body, and a large number of fibromas.

Laboratory Examination.—Blood examination revealed: hemoglobin, 85 per cent.; red cells, 4,800,000; white cells, 8,500. The Wassermann test and urinalysis were negative. Blood chemistry revealed: nonprotein nitrogen, 20 mg. per hundred cubic centimeters of blood; urea nitrogen, 12 mg.; uric acid, 2 mg. Sugar tolerance after fasting was 99 mg.; one hour after ingestion of glucose, 182 mg.; two hours after ingestion of glucose, 118 mg.; three hours after ingestion of glucose, 107 mg.

A roentgenogram of the skull revealed no changes in the sella turcica. Section of the tumor revealed fibrous tissue.

Fig. 3 (Case 2).—Photomicrograph of section from tumor. × 95.

Experimental Work.—In order to obtain additional evidence as to the possible involvement of the endocrine glands, the patient was given 1 c.c. of epinephrin chlorid, blood sugar tests being made before, ten and thirty minutes after the administration of epinephrin, the pulse and blood pressure being recorded at the same time, according to the Goetsch test. The pulse and blood pressure for twenty minutes revealed no changes; nor were there any subjective disturbances. The blood sugar rose from 90 to 100. In spite of this additional negative evidence of an endocrine disturbance, she was given the various endocrine products, but, as her pains and nervousness were becoming worse, she was advised to have an exploratory operation. This was done in this hospital, and revealed a bilateral chronic salpingitis and oophoritis, necessitating the removal of both ovaries and tubes. Several months later, she was free from abdominal pain and much less irritable.

Case 4.—This patient presented a few features that I have been unable to find in any of the cases reported in the literature. He was 24 years old, and complained of nervousness, insomnia and pains in the forearms along the course of the ulnar and radial nerves, as well as pains and weakness in the legs. His family history was negative. He had been irritable and had had cutaneous tumors all his life.

Physical Examination.—The patient revealed normal mentality. He was, in fact, much brighter than the other patients whose cases are reported here. He shared with the other patients, however, in irritability and inability to sustain work for any length of time.

Fig. 4 (Case 3).—Photomicrograph of section from fibroma.

His face showed marked asymmetry. The ascending ramus of the left jaw was about an inch higher than that of the right one. There were no muscle disturbances of the eyes; the pupils were equal and reacted to light and in accommodation. There was no glandular enlargement of the neck. The thyroid was not palpable. The chest was normal. There was no enlargement of the heart; the sounds were normal; the rate was 85. Blood pressure was systolic 110, diastolic 70. The abdomen and genitalia were normal. The reflexes were markedly exaggerated.

Scattered over the chest and back, there were a few small, soft fibromas. Over the arms, along the course of the ulnar and radial nerves, and on the legs, along the course of the external cutaneous nerves, there were chains of tumors. These were not attached to the skin, were sharply circumscribed and about one-half inch (1.2 cm.) apart. On the thigh these tumors varied in

size from that of a pea to that of a large orange. They were tender on pressure. These tumors gave him pains in the arms and legs. This peculiar distribution of the multiple neurofibromas associated with pains and weakness adds another feature to Recklinghausen's disease.

Laboratory Examination.—Blood examination revealed: hemoglobin, 90 per cent.; red cells, 4,800,000; white cells, 9,000. The Wassermann test and urinalysis were negative. A roentgenogram of the skull revealed a normal sella. Basal metabolism was normal. A section of the tumor removed from the thigh revealed fibrous tissue.

COMMENT

The study of these cases fails to reveal any endocrine dysfunction in the etiology of Recklinghausen's disease. It supports, however, the theory of an embryonic disturbance in the ectoderm as the cause of neurofibromatosis. Furthermore, Recklinghausen's disease has a distinct hereditary tendency in the great majority of cases, if not in all. The number of cases of several members in a family suffering from the same disease is too great to be reported here. Of particular interest, however, are the cases of Harbitz and Nonne. The former author reports elephantiasis occurring in five generations, and the latter reports elephantiasis of the feet occurring in eight members in three successive generations. Furthermore, the two cases reported in this paper, namely, those of a mother and a son, the latter having an unusual elephantiasis-like growth, serve to emphasize more strongly the hereditary tendency of Recklinghausen's disease. I believe that were it not for the profound ignorance and low intelligence of many of these patients, a history of heredity would be obtained in all of these patients. Many patients with this anomaly deny the presence of cutaneous tumors in other members of the family because some other member happens to have the so-called abortive type of Recklinghausen's disease, having only one or two small tumors, and a predominance of nervous symptoms. These patients are not only unrecognized by the family, but by physicians as well.

While I am fully aware that in a number of reported cases there were disturbances in the endocrine glands during life and tumors postmortem, I cannot help but feel that a constitutional disorder like Recklinghausen's disease, attacking as it does the whole nervous system, and predisposing as it does not only the skin but the various organs in the body to tumor formation, may also attack the endocrine glands, either by some structural or functional disturbances of the nerves of these glands or by tumor formation. There are cases, quoted in Ewing's book on the pathology of tumors, in which fibromas were found in the brain, pleura, gastro-intestinal tract and between the vertebrae. Why, then, should the endocrine glands be blamed for the occasional occurrence of tumors in them?

Since all the evidence points to an hereditary anomaly of the ectoderm as the cause of this disease, what is the nature of this developmental defect? Recent biologic studies in hereditary structural defects throw a good deal of light on the ectodermal defects of Recklinghausen's disease, and may in the near future answer the foregoing question.

Halsey Bagg reports experiments in which by applying various physical or chemical agents at a definite stage in the development of an embryo, definite structural defects could be produced. For instance, by reducing the temperature or the oxygen of a fertilized egg of a vertebrate, double monsters would invariably be developed. Furthermore, by mating male and female mice that were irradiated for twelve seconds on each of five successive days, he produced in three successive generations animals with constant defects of the eyes. The defect occurred in 100 per cent. of the offspring, according to the mendelian law. Examinations of such embryos in utero revealed vascular extravasations at the site from which the defective organ would develop. These vascular changes would arrest the further development of the particular organ involved, and thus led these biologists to the conclusion that the nature of such hereditary defects was that of arrested development.

In the light of such experimental revelations, it is more probable that the anomalies represented by Recklinghausen's disease are due to a physical, chemical or nutritional disturbance in the environment of the developing embryo at the stage when the ectoderm is forming the nervous system and are transmitted to the following generations according to the mendelian law.

Some such explanation of the etiology of the foregoing disease may lead to further search for the truth, whereas branding these patients as having endocrine dyscrasias will hamper further scientific investigations, and add one more burden to the already overburdened realm of endocrinology.

GRANULOMA PYOGENICUM

A CLINICAL AND HISTOLOGIC REVIEW OF TWENTY-NINE CASES*

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Cases of granuloma pyogenicum are frequently exhibited by dermatologists, who briefly define the condition as "a small, red, prominent, pedunculated tumor occurring on exposed surfaces, often eroded or crusting, oozing a small amount of pus, chronic in clinical course, benign, but having the tendency to recur unless completely destroyed."

Although, through numerous observations, granuloma pyogenicum has been thoroughly established as an entity, pathologists, on histologic grounds, have considerably widened the conception of this condition. They differ from the clinicians on two main points: First, they do not consider pedunculation as a requisite for diagnosis; and, secondly, they have demonstrated that the epidermal change may vary from erosion with complete loss of epithelium up to extreme thickening with hyperkeratosis and acanthosis. Although the conceptions of the disease do not essentially vary, I believe the term pyogenic granuloma should include all sharply circumcribed granulation tissue growths occurring on cutaneous or mucous membrane surfaces and having the appearance of a tumor.

MATERIAL

The following communication is based on a histologic study of the material contained in the pathologic collection of the University of Minnesota and the observations made on a series of cases examined clinically.

HISTORICAL NOTE AND LITERATURE

Beginning with the communications of the French surgeons, Poncet and Dor,[1] in 1897, up to the present time, many articles have been written about granuloma pyogenicum. The early investigators concerned themselves largely with a discussion on the similarity or dissimilarity of this condition and the peculiar disease occurring in horses following castration, known as botryomycosis. The controversy was carried on by French and German authors until it was unanimously agreed that the two conditions were not identical. The next question to be discussed was that of etiology. There now is comparative agreement that *Staphylococcus aureus* is usually present, but it is not known definitely whether it is the specific exciting cause.

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* From the University of Minnesota Medical School.

1. Poncet and Dor: Botryomycosis humaine, Rev. de chir. **18**:996, 1897.

In this country, reports have been made by Hartzell,[2] Sutton,[3] and others. Wile,[4] in 1910, published an extensive summary of the literature to that date, and discussed observations of his own. This article was published simultaneously in America and Germany, where it was included in the "Festschrift" for Professor Unna.

In the articles of Bichat,[5] Lenormant,[6] Heuck [7] and Falkenstein,[8] one may find complete and exhaustive references for the entire literature on the subject of pyogenic granuloma. These articles have been quoted from freely.

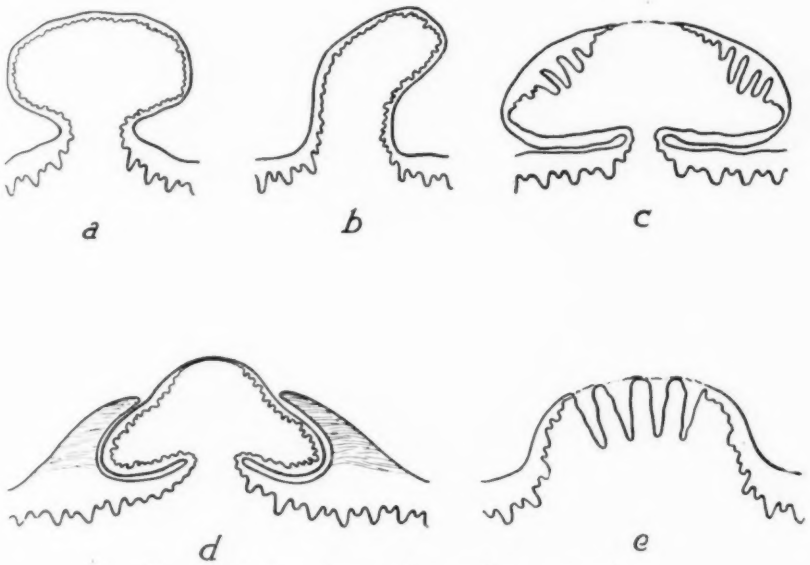

Fig. 1.—Various shapes of granuloma pyogenicum.

NOMENCLATURE

Bodin,[9] in 1902, conclusively disproved the existence of the so-called botryomycetes, but usage had firmly fixed the name botrymycosis hominis, and to this day the term is retained in France. Even as late

2. Hartzell, M. B.: Granuloma pyogenicum, J. Cutan. Dis. **22**:520, 1904.

3. Sutton, R. L.: Granuloma pyogenicum of Lip, Am. J. M. Sc. **142**:69, 1911; J. A. M. A. **66**:1613, 1916.

4. Wile, U. J.: Granuloma pyogenicum, J. Cutan. Dis. **28**:662, 1910.

5. Bichat: De la Botryomycose humaine, Arch. gén. de méd. **1**:281, 1904.

6. Lenormant, Charles: Sur la pretendue botryomycose humaine, Ann. de dermat. et syph. **1**:193, 1910.

7. Heuck: Ueber Granuloma pediculatum, Dermat. Ztschr. **19**, Nos. 3 to 5, 1912.

8. Falkenstein: Ueber Granuloma pediculatum, Dermat. Ztschr. **27**, Nos. 5 and 6 (Jan.) 1923.

9. Bodin: Botryomycosis humaine, Ann. de dermat et syph. **3**:289, 1902

as 1921, Civatte [10] and Dubreuilh [11] each exhibited a case and reported it under this title in the official bulletin of the French Dermatological Society.

Küttner [12] suggested the name granuloma telangiectodes. This term, however, has not been retained. More recent German authors have used the name granuloma pediculatum or granuloma pediculatum benignum. My analysis has shown that only about one half of the patients have a distinct pedicle. This should be reason enough for discarding that name.

Fig. 2.—Granuloma pyogenicum occurring on lower eyelid (from University Clinic).

Hartzell proposed the name granuloma pyogenicum, and since this name is more suggestive of the process, more descriptive than any of the others and already well established, there seems to be no reason why it should not be universally accepted.

SEX, AGE AND OCCUPATIONAL INCIDENCE

In the Minnesota collection, there were sixteen females and ten males, and in three cases the sex was not stated in the record. The

10. Civatte, and Charpy, P.: Un cas de botryomycome, Bull. de la Soc. franç. **28**:324, 1921.

11. Dubreuilh: Botryomycome ungineal, Bull. de la Soc. franç. **28**:516, 1921.

12. Küttner: Ueber telangicktatische Granulome, Beitr. zur klin. Chir. **47**:1, 1905.

ages varied from 9 to 42 years. The occupation apparently had no bearing on the etiology, for cases occurred in all walks of life.

HISTORY OF INJURY

In fifteen of these cases there was a definite history of injury, usually a mild traumatism, such as a pin or thorn prick or a small cut. One case followed a mosquito bite; another the removal of a sliver. The injury was not always coincident with the beginning of the growth. In one case, the injury occurred two months previously.

SITE

In fourteen cases, the lesion was on a cutaneous surface; thirteen cases occurred on mucous membranes, while in two cases the site was

Fig. 3 (From University Clinic).—Typical granuloma pyogenicum; pediculated type.

not given. In 126 cases analyzed by Lenormant, 107 lesions were on the skin, while nineteen were in the mouth—seventeen of them being on the buccal mucosa, one on the tongue and one on the palate. In our series, the lip and the gum were common locations. One tumor was located on the conjunctiva, and another was excised from the bladder mucosa under the diagnosis of papilloma.

While no part of the body seems to be immune, the exposed parts of the face and hands are by far the commonest locations, especially the palmar surfaces of the fingers and hands.

SIZE, SHAPE AND NUMBER

The growths vary decidedly in size. The majority of them are approximately 1 cm. in diameter. In our case recorded as occurring on

Summary of Findings. Preponderant Pathologic Change Is Noted

No.	Age	Sex	Site	History of Injury	Duration	Size	Pedicle	Sessile	Histology	
									Epidermal	Subcutaneous
0-17-376	..	..	.....	.....	.....	0.8 cm.	+	—	Erosion	Angiomatous islands, enclosed in fibrous
0-20-808	..	F	Gum	Tooth lacerated	3 mo.	0.8 cm.	+	—	Erosion	Angiomatous; fibrous infiltrate
0-21-346	25	F	Gum	.....	.....	.....	—	+	Erosion	Angiomatous; fibrous
0-21-426	26	F	Lip	Yes	.....	.....	—	+	Erosion	Infiltrate
0-22-239	..	M	Gum	Plate	9 mo.	2.0 × 0.8 cm.	+	—	Erosion	Infiltrate
0-22-616	..	F	Ear	... ..	.....	.....	+	—	Erosion	Infiltrate
0-22-776	..	M	Gum	.....	.....	.....	+	—	Erosion	Angiomatous; fibrous
0-22-779	42	F	Finger	Yes	3 mo.	0.8 cm.	+	—	Erosion	Angiomatous fibrous
0-22-804	22	F	Bladder	Kidney infection	2 yr.	.....	+	—	Erosion	Fibrous infiltrate
0-24-2	..	F	Conjunctiva	.....	5 wk.	0.5 cm.	Slight	—	Erosion	Fibrous infiltrate
0-24-120	..	M	Finger	.....	2 mo.	1.0 cm. diam.	+	—	Erosion	Angiomatous; fibrous infiltrate
0-24-144	..	M	Finger	Yes	4 mo.	1.5 cm.	+	—	Erosion	Angiomatous; fibrous
0-24-724	..	F	.....	.....	.....	1.0 cm.	Not determined		Erosion	Infiltrate; fibrous
0-20-289	20	M	.....	Yes	5 wk.	1.5 × 0.5 cm.	—	+	Erosion acanthosis	Angiomatous; infiltrate
0-20-565	..	M	Finger lateral surface	Yes	3 mo.	1.2 × 0.6 cm.	—	+	Erosion acanthosis	Angiomatous; infiltrate
0-22-436	..	F	Gum	Yes	5 mo.	2.0 cm.	+	—	Erosion acanthosis	Angiomatous
0-24-344	14	M	Gum	.....	4 mo.	1.5 × 1.0 cm.	+	—	Erosion acanthosis	Angiomatous; fibrous infiltrate
0-22-930	25	F	Toe	.....	.....	0.8 cm.	—	+	Erosion hyperkeratosis adjacent	Infiltrate
0-24-408	..	..	Hand	Fissure	2 mo.	1.0 cm.	—	+	Hyperkeratosis	Angiomatous
0-24-827	12	M	Finger	Yes	1 mo.	2.0 cm.	—	+	Hyperkeratosis	Angiomatous; infiltrate fibrous
0-13-137	35	F	Finger palmar surface	Yes	1 mo.	1.5 cm.	—	+	Hyperkeratosis acanthosis	Angiomatous; fibrous
0-22-926	..	F	Finger	Thorn prick	3 mo.	0.8 cm.	—	+	Hyperkeratosis acanthosis	Fibrous infiltrate
0-24-64	38	M	Thumb	.....	3 wk.	1.5 cm.	—	+	Hyperkeratosis acanthosis	Infiltrate
0-24-171	..	..	Gum	.....	.....	.....	+	—	Hyperkeratosis acanthosis	Fibrous
0-24-655	..	F	Finger	.....	.....	1.0 cm.	—	+	Hyperkeratosis acanthosis	Infiltrate
0-17-230	..	F	Lip	No	9 mo.	.....	+	—	Thinned	Infiltrate
0-24-230	23	M	Lip	Yes	3 mo.	1.0 × 0.5 cm.	+	—	Thinned	Angiomatous; fibrous
0-24-560	9	F	Upper jaw	Yes	3 wk.	3.0 cm.	+	—	Thinned	Angiomatous; infiltrate
0-24-637	..	F	Thumb	Yes	1 mo.	1.0 cm.	—	+	Thinned	Infiltrate

the conjunctiva, the growth was no larger than the head of a match; while in John Armstrong's[13] case exhibited before the Minnesota Dermatological Society, the growth was as large as a small hen's egg. It was on the abdominal wall.

The location to some extent at least seems to determine the shape. The illustration shows schematically the various shapes encountered. The types shown in Fig. 1 *a* and *b* are those most commonly found on the lips and face. The larger pyogenic granulomas usually are of the shape of Fig. 1 *c*, while those found on surfaces that are subject to pressure, such as the palmar surfaces, assume the shapes *d* or *e*. There is nothing fixed about the type that may occur at any particular site. Any of the shapes or variations of them may be encountered in almost any part of the body.

Fig. 4 (From General Hospital Clinic).—Granuloma pyogenicum, simulating a cutaneous horn.

Sixteen cases in our series from microscopic study alone showed distinct pediculation, while thirteen specimens were sessile, or the base was as broad as the body of the tumor and they were therefore classified as sessile.

The lesions have in general a spherical shape, which may be flattened out considerably because of anatomic position.

When a pedicle is present it may be very thin, a mere stem bearing a spherical lesion giving a mushroom-like contour, or the pedicle may be almost as broad as the body of the tumor. By traction or close examination with the aid of a dull probe, a pedicle may be discovered in a growth which is apparently sessile. The principal mass of the tumor rests on the surface.

13. Armstrong, John: Granuloma pyogenicum, Abstr., Arch. Dermat. & Syph. **2**:128, 1920.

The sessile tumors are more frequently found on the palmar surfaces. Here they may be button-like with a thickened epithelium surrounding them, giving the appearance of a lesion in the center of a callus. This type has no secretion and does not crust. Another type of palmar lesion encountered is a pedunculated growth which appears to have been depressed into the surrounding tissue like a foreign body, or erupts through skin like a mushroom. It is surrounded by a frayed epidermis and oozes some pus, for the epithelium between the body of the tumor and skin is macerated. The entire growth may be capped by a heavy crust which must be removed before the identity of the lesion may be established.

Fig. 5 (From University Clinic).—Granuloma pyogenicum; sessile and pediculated growths. They were removed by surgical excision, an undesirable scar resulting.

Sometimes the lesions have the appearance of a cutaneous horn (Type 6). This type is sessile, may be a centimeter or more in height and is higher than it is broad. They bleed easily, secrete very little pus, and may bear a black crust of clotted blood at their tip. This type is to be found on the cheek or projecting from the edge of the nostril.

The surface of pyogenic granulomas is not as a rule perfectly smooth, but shows lobulation, giving a raspberry-like appearance, or the surface may be rough with toothlike projections.

The color is usually a shade of red. It may be very bright in new growths or a dark red as the tumors grow older. If hemorrhages have occurred, a melanotic brown may result. The palmar lesions that are not eroded are covered with a pearly translucent epithelium with a red tinge showing through.

Erosion or ulceration is common. Lack of erosion is reason enough to look with suspicion on the growth and to proceed with caution in establishing a diagnosis of granuloma pyogenicum. In our series, eighteen cases showed erosion. Four cases showed such thinned epithelium that they might easily be considered as potentially eroded, while seven cases showed a thickened epithelial covering.

The consistency of a pyogenic granuloma is firm and not very compressible. Some are softer than others, but in no case are they as friable as ordinary granulation tissue. The age, location and predominating pathologic change are deciding factors in the texture of

Fig. 6 (From Student Health Clinic).—Granuloma pyogenicum; sessile lesion on palm of hand. One freezing with carbon dioxid snow, twenty seconds' duration, brought about complete disappearance without scar.

the growth. In one case seen in the tibial region and present about four months, the lesion felt like a hard fibroma.

Solitary tumors are the rule; cases in which there are multiple lesions being exceedingly rare. Autoinoculations were attempted by Bichat, but his implantations produced only ordinary suppurations, no granulomas developing.

SUBJECTIVE SYMPTOMS

The evolution of these growths is always about the same. The onset is insidious. The patient may or may not recall a coincident slight trauma, but the time from the onset until the granulomas have attained their full size is short. It should be emphasized that these small tumors grow to a certain size, when they become stationary, and may then remain at their fixed size for a prolonged period. After their size is attained, growth is not renewed.

Hemorrhage is one of the common and constant characteristics of pyogenic granulomas. For this reason, they are often termed "blood-warts" by laymen. Suppuration is another fairly common symptom. The amount of pus may vary from a mere oozing on pressure to a copius discharge which requires surgical dressings. Pain is never severe enough to cause the patient to seek relief. Lymphangitis of a marked degree and regional adenitis may develop, and in such an event fever and pain may be present. Itching may be annoying, especially in cases occurring in the bearded region. Manipulation of the growth causes no discomfort. The lesions are practically without sensation.

The persistency, the size or location of the growth, bleeding at the slightest provocation, or suppuration which has resisted all of the common remedies are usually the reasons why the patient consults a physician. Subjective symptoms are either lacking or play a minor rôle in the history of the case.

Fig. 7 (From General Hospital Clinic).—Granuloma pyogenicum; lesion on lip simulating an epithelioma.

HISTOLOGY

The histology of granuloma pyogenicum, although varying in the preponderance of certain elements, is in the main a constant one. It is essentially the histology of ordinary granulation tissue.

The epidermis, cellular infiltrate, new blood vessel formation and fibrous tissue are the elements which must be considered.

The precise course of events in the formation of a pyogenic granuloma must be a matter of speculation, for it is obviously impossible to investigate microscopically the same growths at different stages of development. Certain observations, however, lead one to conjecture concerning the possibilities.

When a pyogenic granuloma develops at the site of an injury which has caused a break in the continuity of the tissues, the first stage after the blood has clotted probably is the formation of an exudate composed of various types of cells and serum, its function being to remove all damaged tissue and to absorb the blood clot. Fibroblasts soon appear,

and they are the cells which undergo organization into fibrous tissue and blood vessels; vascularization of this cellular mass is brought about by a budding process from the nearest capillaries. The new blood vessels soon become lined with definite endothelial cells, and connective tissue develops in the intervascular spaces. Cuticle may or may not form over this granulating mass, or epidermis may form and later be destroyed by an inflammatory reaction resulting from infection present or occurring if bacterial invasion subsequently takes place.

When the granuloma develops at the site of a puncture wound or subcutaneously, the course of events is probably different. The first stage here probably is the formation of a dense cellular infiltrate just

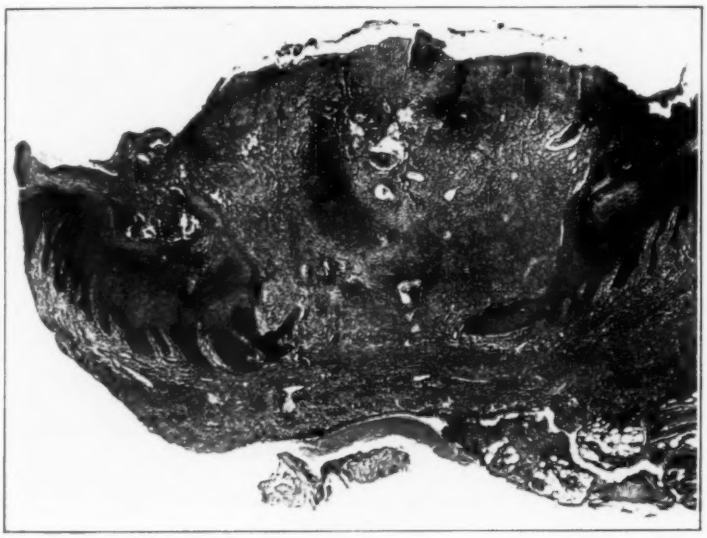

Fig. 8.—Characteristics of a pediculated eroded growth. Lower power magnification.

beneath the epidermis, but the reaction is not intense enough to cause dissolution of the epithelial covering; rather it causes a proliferative change. Acanthosis and even hyperkeratosis results. Because of the benign character of the excitant or of the low reactive power of the particular tissue, granulation tissue is formed, rather than a phlegmon, which may remain subcuticular.

When there is no erosion or secretion, microscopic study usually shows marked acanthosis.

Growth of the tumor mass causes stretching and thinning of the epithelium; or if the pyogenic process becomes more intense, complete erosion or erosion limited to the uppermost part of the tumor is almost

certain to occur. It has been noted in a markedly lobulated tumor that the tips of the lobulations were eroded while the epidermis at the furrows showed acanthosis. Loss of epithelium, either total or in part, occurred in eighteen of the twenty-nine specimens studied.

The more protuberant the mass is, the more constant the erosion or extreme thinning of the epithelium. The epithelium immediately adjacent to the growth usually shows acanthosis very much resembling the limiting pegs found at the periphery of a chancre.

The sessile growths often show marked lengthening of the rete pegs throughout the lesion, while the epithelium over the area between the pegs may be decidedly thinned or completely lost. In our series, eleven

Fig. 9.—Hyperkeratosis, acanthosis and dense infiltrate in upper portion of a sessile tumor. Lower power magnification.

cases showed acanthosis either alone or combined with hyperkeratosis or erosion. Hyperkeratosis is noted in palmar lesions, especially at the edges of sessile growths.

The amount of cellular infiltrate varies decidedly and also varies at different planes of the tumor. It is most marked in the upper third of the tumor, especially in eroded lesions and in the sessile tumors, where there is marked acanthosis. In lesions in which the epithelium is intact even though thinned, there is often almost complete absence of infiltrate. In certain specimens, there is a line of demarcation between the infiltrative and angiomatous portions of the tumor. The infiltrate is leukocytic, various types of cells being found. Round cells and polymorphonuclear cells predominate. Mast cells have been noted, and

Kreibich [14] recorded the finding of giant cells. Free red blood corpuscles are often present.

The new blood vessel formation is constant, only varying in the number and size of the vessels or blood spaces. In certain specimens, the vessels are small and all of the same size; in others, the sizes vary a great deal, large dilated lacunae being found packed with red blood cells. The vessels and spaces all have a thin endothelial lining. The angiomatous area may be diffuse or occur as a distinct zone. The spaces between the blood vessels are occupied by connective tissue, infiltrate or a mucoid substance.

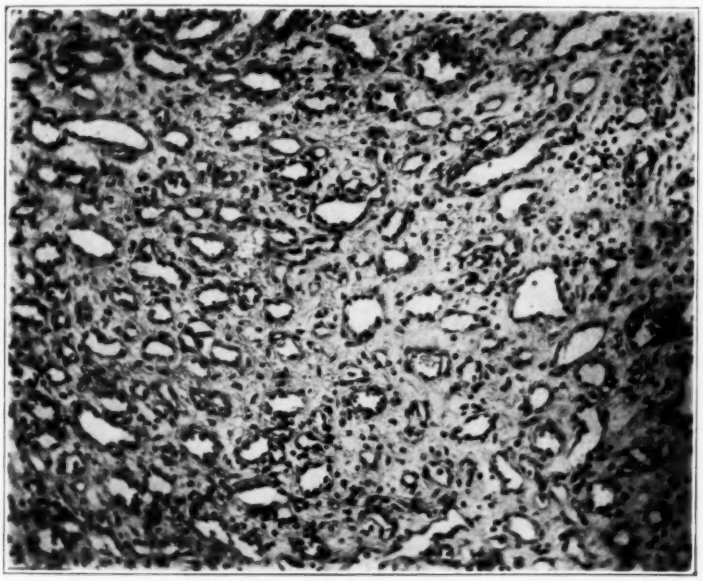

Fig. 10.—Granulation tissue with blood vessels of uniform size. High power magnification.

The fibrous tissue varies with the age and type of lesion. In some of the sections examined, the connective tissue was firm and well developed, and found throughout the mass of the tumor. As a rule, the radicular portion shows the more advanced fibrous tissue where it forms a compact base from which a fanlike stroma spreads throughout the mass of the tumor.

DIAGNOSIS

The diagnosis of pyogenic granuloma can usually be made without much difficulty, especially if one has previously seen a case demonstrated. The typical pedunculated, red raspberry-like tumor, the rather short

14. Kreibich: Ueber Granulome, Arch. Dermat. u. Syph. **94**:121, 1909.

duration without extension, the suppuration, and hemorrhage on the slightest injury, all are important points in making a diagnosis.

Flat sessile lesions look surprisingly like a chancre. I examined the secretion from a lesion on three successive days with the dark field before I was able to convince myself and a dermatologic confrère that the lesion was not syphilitic. Clinically, it varied only in that it was brighter red and in that serum could be expressed from it with difficulty, only a few drops being secured.

Fig. 11.—Blood lacunae in angiomatous type of lesion. High power magnification.

A pyogenic granuloma of the lower lip may be mistaken for an epithelioma if care is not exercised and if the diagnostician does not keep the possibility of a granuloma in mind. The firmer consistency, the hard edge and the destructive ulceration are the distinguishing features of a cancer. If a crust is present, it must always be removed before making a decision. In pyogenic granuloma, this procedure causes a rather profuse hemorrhage, which in itself may have considerable influence in making the diagnosis.

Angiomas, the so-called angiosarcoma and hemangioendothelioma, are lesions which must be considered when making a differential diagnosis. Decision must rest on the histologic examination.

The only complication which has been noted is lymphangitis and regional adenitis. Zurhelle [15] reported a pyogenic granuloma occurring in a plaque of lupus vulgaris. He designated the condition as granuloma pediculatum luposum.

PROGNOSIS

The lesions are positively benign, and although there may be regional adenitis, it is of the ordinary inflammatory type and not neoplastic.

From the fibrous change noted in many lesions, it is conceivable that the lesions might scarify or even disappear without therapy.

THERAPY

The therapy is simple but must be suited to the individual lesion and its site. In such a location as the palm, one does not wish to produce a surgical wound with a resulting scar. Here carbon dioxid snow freezings of about twenty seconds' duration, with pressure, have proved effective. In one case, a single freezing sufficed.

Civatte used ultraviolet ray exposures in a periungual case with good result.

Small pedunculated lesions are best removed with a small electro cautery, the growth being elevated, the pedicle severed and the base destroyed with the cautery point. Several small granulomas were excised with a Keyes biopsy punch. Practically no scar resulted, and the method was satisfactory.

Local recurrence is common when treatment is not thorough and continued until destruction is complete.

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15. Zurhelle: Granuloma pediculatum luposum, Dermat. Wchnschr. **66**:345, 1918.

ANGIOMA CAVERNOSUM

REPORT OF A CASE TREATED WITH RADIUM *

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Angioma cavernosum is a vascular defect usually found on the face or scalp, and less frequently on other parts of the body surface.

Less often congenital than the simple angiomas, it usually appears during the first year of life. It is a soft, lobulated, solitary or diffuse tumor situated in most cases in the subcutaneous tissue and elevated above the skin surface. It is not uncommon to find the overlying skin the seat of a superficial nevus vasculosus. Occasionally the tumor may undergo spontaneous necrosis resulting in partial or complete involution of the nevus.

Histologically the tumor is diffuse or encapsulated, and composed of dilated vascular channels which in the early formative period manifest rapid growth.

From a surgical standpoint, it is difficult, if at all possible, to remove such angiomas safely and successfully on account of their location and extreme vascularity.

Wickham and Degrais,[1] MacKee [2] and others have reported satisfactory results following radium treatment. As MacKee [3] has stated, the efficacy of such treatment probably depends on the action of the radium rays on the young, rapidly growing cell structures. Growth is inhibited, new vessels stop forming, and there is a gradual absorption of the existing vascular tissue. After such tumors have reached a fully developed form and have been present for a long period of time, the radium rays do not produce retrogressive changes as in the early undeveloped angiomas.

In the application of radium to the skin surface, it is important to adjust the dosage and filtration to a point at which the effect of the rays will not result in damaging the overlying integument. First degree reactions in which there is only erythema of the skin are to be avoided

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* From the Division of Dermatology of the Department of Medicine, Peking Union Medical College.

1. Wickham, L., and Degrais: Curative Action of Radium on Tuberous Angiomata, Bull. et mém. Soc. de chir. **35**:1286, 1909; Angiomatous Tumors of Considerable Dimensions Cured by Radium, Bull. Soc. franç. de dermat. et syph. **22**:269, 1911.

2. MacKee, G. M.: X-Rays and Radium in Treatment of Diseases of the Skin, New York, Lea & Febiger, 1921, p. 491.

3. MacKee, G. M.: Footnote 2, p. 275.

just as much as the more severe reactions. This may be accomplished by using only the short gamma rays at sufficient distance from the skin surface.

Figure 1 shows an extensive angioma cavernosum which appeared a few days after birth and rapidly enlarged to the size illustrated. The photographs were taken when the patient was 4 months of age. The

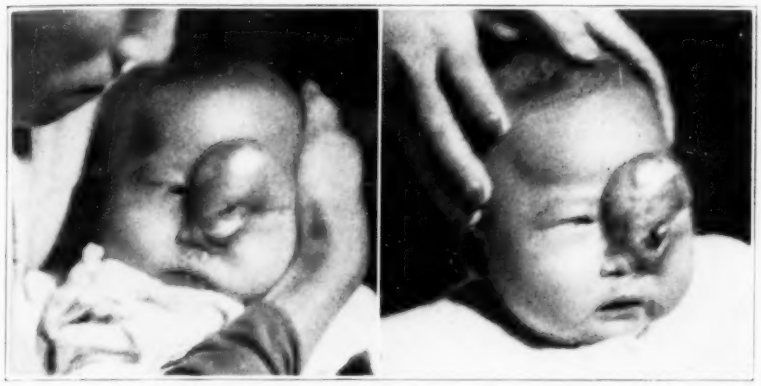

Fig. 1.—Angioma cavernosum before treatment.

A B

Fig. 2.—*A*, four months after radium treatment; *B*, eight months after treatment.

tumor was very soft and presented an ulcerated area at its lower outer segment. The overlying skin was the site of a superficial nevus vasculosus.

Ninety milligrams of radium element divided into four tubular applicators, two of which contained 25 mg. and two 20 mg. each, were distributed over the surface of the tumor in such positions as to permit the rays to enter the growth at different angles. The 25 mg. applicators were

screened with 1 mm. each of silver, brass, lead and hard rubber. The 20 mg. applicators were each composed of two 10 mg. needles screened with 0.4 mm. of an alloy whose density was 8.7, and 1 mm. each of brass, lead and hard rubber. The applicators were placed at 2 cm. distance from the surface of the skin. The surrounding area was protected by 1 mm. of lead with 1 cm. of gauze between the lead and the skin. A single exposure of twenty-three hours was given with all applicators in place.

This amount of radiation produced no visible superficial reaction, and the angioma after three weeks, gradually decreased in size. Figure 2, *A* was made four months and Figure 2, *B* eight months following the single radiation, at which time the tumor had completely disappeared. Considering the size and the location of the angioma, the cosmetic result was very good, although there remained some scarring. At the lower margin of the scar was a small recurrence of the superficial vascular nevus, which could have been removed either by radium or carbon dioxid snow had the patient not disappeared from the clinic at that time. Little deformity of the nose remained. There was no evidence that any damage had been done to the left eye.

AN EPITOME OF THE HISTORY OF SYPHILIS

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The problem of the history of syphilis is twofold. First, in the light of the historical evidence at our disposal, we must establish whether syphilis existed in the days of ancient history, or whether it is a comparatively new disease which made its first appearance toward the end of the fifteenth century. Second, assuming that syphilis was first seen on the European continent at the end of the fifteenth century, the crux of the problem is whether the disease arose spontaneously in Europe, or whether it was brought back by Columbus' voyageurs from the New World on March 13, 1493, or on any of the subsequent returns from America. Both of these questions have received much attention in historical literature. As far as I could discern, many writers on the subject started out with preconceived notions rather than with an open mind concerning the problem, and their conclusions therefore were tainted with the elements of their own opinions. I am beginning this task with no *a priori* ideas. I shall try to present the historical evidence that merits trust and which is based on a certain degree of accuracy, and to weigh that evidence qualitatively as well as quantitatively before coming to an unbiased decision regarding the questions that now confront us.

ORIGIN OF NAME

Before we proceed with the main discussion, it might be instructive to consider the origin of the name. The legendary history is that Syphilus, a shepherd, was guarding thousands of white sheep on the island of Ophyre, under the burning heat of the sun, when the prairies were dry and the forest did not afford any shade to the shepherd, nor did any breeze offer relief. Pitying the herd and angry on account of the heat, he looked to the sun and spoke words of blasphemy. The sun god sent punishment to Syphilus. His body became covered with sores, he passed sleepless nights and felt spasms in his limbs, and from him the disease took its name, and all the people called it syphilis.

Hieronymus Fracastorius, a noted physician who lived from 1483 to 1553, first applied the name to the disease in a written manuscript—a poem entitled "syphilidis sive morbi Gallici"—composed in 1521 and published in 1530. Fracastorius was also the first to describe the symptoms of syphilis and to propose mercury for its treatment.

ORIGIN OF SYPHILIS

What evidence do we have that syphilis is an ancient disease and that it existed even in antiquity?

1. Egyptian archeopathologic findings. Fouquet, Jarricot, Lortet and other investigators in paleopathology have suggested that syphilis existed in Egypt. Lortet and Caillard have reported lesions of syphilis in the skull of a young woman found among the Egyptian mummies. The lesions take the form of irregular erosions in the outer table of the frontals and the anterior portion of the parietals. They also recall the lesions described by Eaton, in a child's skull from ancient Peru, which were ascribed to syphilis. But these are only two cases—not definitely proved to be syphilitic—against the hundreds of other specimens which were examined and in which there was no suggestion of syphilitic disease.

2. Chinese. Captain Gardy published a book in 1863 entitled "Medicine among the Chinese." This is a compilation of Chinese medical works, the oldest one of which dates back seventeen centuries before the Christian era. The descriptions in those works of chancres, of ulcers of the genital organs in man and woman, of lesions on the breast, mouth, nose and anus are so perfect that no doubt is left in one's mind after reading these that they were of a syphilitic nature.

3. Hebrews. The malady of Job, his ulcers and scars resemble more those of syphilis than—as Rollet and Bartholin would have it—those of scurvy. The pains of David, which were nocturnal, and especially those in the bones indicate their syphilitic character.

It seems to me that a strong argument in favor of the existence of syphilis in ancient times was the great prevalence of so-called "leprosy." In the old testament we find repeated reference to persons with leprosy who had been isolated in the "isolation tent" outside of the camping grounds for seven or fourteen days, and then were declared clean or cured. It is hardly in accord with our present notion of leprosy that a case could be cleared up in from seven to fourteen days, and by mere isolation. We can conceive though that a person with a primary lesion or with a multiform secondary eruption of syphilis could be cured of these external manifestations by simple isolation for from seven to fourteen days without any scars or disfigurement. This is because both of these stages of syphilis are self-limited. The conclusion, therefore, forces itself on one's mind that these so-called "lepers" who were cured in from seven to fourteen days, as well as the lepers of the middle ages with their cortege of cutaneous manifestations, were in reality persons with the primary or secondary manifestations of syphilis.

We also learn from the old testament that at "Shehutim" there was a temple Baal Peor on Mount Peor where the young daughters of the Moabites exposed themselves. The Jews, in their march through the desert, stopped at "Shehutim," and took part in the festivities at Baal Peor, following which they developed the plague. Was this plague following venereal excesses a syphilitic one?

4. Romans. Syphilis among the Romans has been described by Celsius, Aeretius, and Aetius. In these descriptions one recognizes not only chancres and secondary syphilitic lesions, but also tertiary manifestations of syphilis, including profound pains in the bones.

5. America. The Abbe Brasseur de Bourbourg proved that the original documents in the language of the people of the Anahanc valley confirm the existence of syphilis in America long before Columbus' discovery.

Thus far I have enumerated facts and statements which seem to indicate that syphilis is a disease which existed even in the period of ancient history. Now I shall bring forward some of the arguments against that idea, i. e., views favoring syphilis as a new malady which appeared on the European continent for the first time in 1493, and which was unknown to the Greek, Roman and Arabian physicians.

An argument raised against the antiquity of syphilis is the fact that a great observer like Hippocrates did not mention the disease in his writings, nor is there any definite account given of the disease in the writings of the Greek and Roman physicians. Dr. Astruc says:

> It is evident, from the silence of all the physicians, historians and poets, from the days of Hippocrates to the present, that no notice was taken of it; and it is the more astonishing as they were scrupulously accurate in describing every other disease that occurred in their times that they should omit mentioning so remarkable, so direful, and so common a distemper, if it had been so frequent among them as for over four centuries it has been with us. Even Rome in her greatest luxury, at the time when she was outrivalling every other nation in dissipation; when her people were addicted to every sensual and inordinate gratification, when they were entirely abandoned to all the excesses of unlawful pleasures, were unacquainted with this disease, or so prolific a subject would not have escaped the satiric poems of a Horace or a Juvenal.

This argument, it seems to me does not concur with what we know concerning the methods of the scientists of those days. The physicians up to the fifteenth century and beginning of the sixteenth century were too much of the belief that everything which is known could be found in the Greek and Arabic scriptures, and they thus made these works their life study rather than a study of the diseases themselves. When a dispute arose concerning a certain question, no matter how simple it may have been or how easily it could have been verified by

direct observation, the works of their authorities were consulted, and whatever interpretation was found in Hippocrates', Galen's or Avicenna's works, was accepted with catholic credulity. In other words, deductive reasoning was not practiced in those days, and belief rather than actual observation and study prevailed.

A much stronger argument which refutes the antiquity of syphilis is found in the remarkable recent publications by Sir Mark Armand Ruffer [1] and Roy L. Moodie [2] on paleopathologic researches on Egyptian mummies.

The mummies examined came from the eighteenth to the twenty-seventh dynasties (1580 B. C. to 525 A. D.) and from the time of the Persian conquest (500 B. C.). The investigations therefore range over a period of 2,000 years, some of the mummies dating back 3,500 years.

The results of their study of the arterial system are stated as follows:

> There can be no doubt respecting the calcification of arteries, and that it is of exactly the same nature as we see at the present day, namely, calcification following on atheroma. *Syphilis can be eliminated with considerable certainty, as no pathological specimens of this disease in ancient Egyptians have as yet been discovered.*

Regarding bone lesions, Moodie says: "In studying the evidences of syphilis among early human races it is very important to keep in mind the nature of the fossil bones of extinct animals which show hypertrophy, hyperostoses, and carious roughening quite similar to the lesions frequently diagnosed among ancient bones as syphilis." Such diagnoses are of uncertain importance unless backed by further evidence. Virchow called attention to this similarity in his paper on the history of syphilis. *"It may be said safely that syphilis has not been definitely shown to exist anywhere in fossil or subfossil bones."*

It is seen, therefore, that the most modern methods of gross and histologico-pathologic examinations failed to disclose any evidence of syphilis among the ancient Egyptians.

The point which some raise against the antiquity of syphilis is that it had no particular name affixed to it. Such learned men as Luisinus and Girtanner, who saw and described the malady in the later years of the fifteenth and commencement of the sixteenth century, commented on it as morbus novus, morbus ignotus, segritudo inaudito, aegritudo nova,malum novum, etc. As the disease made its entrance into Europe, it was looked on as an anonymous malady, and each nation bestowed on it the name of the country from which they imagined they first received it.

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1. Ruffer, Mark Armand: Studies in the Paleo-pathology of Egypt.

2. Moodie, Roy L.: Paleo-pathology; an Introduction to the Study of Ancient Evidences of Disease.

William Turnbull,[3] in discussing the subject, disposes of the evidence found in the old testament concerning the existence of syphilis in the biblical times as follows:

> The boils of Job, and the pains of David in the bones, have been supposed venereal, but without the least foundation. The learned Josephus, the celebrated Jewish historian, makes no mention of this disease; if such a one had been common in his time, it would not readily have escaped the penetrating genius of that much admired author. Furthermore, the tendency of poets like David to speak allegorically, may explain his statement, "there is no soundness of his flesh, because of the anger of God."

Regarding the existence of syphilis in America, we have more positive indications. H. H. Harte examined the skulls and other human remains found in an Indian ossuary in Maryland. He found in them the pathologic appearances and evidences of syphilis.

The researches of Bruehl, Jones and others have fortified the indications of prehistoric syphilis in America, and the evidences of its presence among the island inhabitants of the New World are as significant and authentic as the proofs of its nonexistence in Egypt, as confirmed by the pathologic examinations of mummified specimens.

The Mexicans, according to Bruehl, not only recognized the primary and consecutive manifestations of the malady, but even distinguished between its several types. They were so experienced in its management that they instructed the Spaniards how to deal with it.

The evidence presented pro and con the antiquity of syphilis, especially in view of the recent paleopathologic contributions, it seems to me points strongly to the fact that syphilis did not exist in the old world, except perhaps in Eastern China and Japan, and that it did exist in the New World among the native islanders, being autochthonous there or having been brought there from Eastern Asia.

ORIGIN OF SYPHILIS IN EUROPE

Now that the evidence seems to favor the view that, with the exception of the New World and perhaps Eastern Asia, syphilis was unknown in the Old World, our second problem presents itself, namely: Was syphilis brought from the New World by Columbus and his crew to Europe, or did it occur spontaneously on the European continent?

Sanchez,[4] strongly opposed to the idea of the transfer of syphilis by Columbus' men to Europe, says that he examined carefully the works of Bry, and Meriany, the "Voyages of Ramusio," the "Novus Orbis" and the works of Pierre Martyr d'Anglette. In all of these works he

3. Turnbull, William: Lues Venerea.

4. Sanchez, M.: Examen historique sur l'apparition de la maladie venerienne en Europe.

found a detailed description of the voyages of Christopher Columbus, all that was observed in the Islands of Espagnole, Jamaica, Cuba, Porto Rico, and the rest of the Antilles and the gulf region. They describe the manners, customs and habits of the inhabitants—men and women—men going absolutely naked and women wearing only a covering over the pubic region; they describe the animals, insects, flora and fauna of the regions; but nowhere does one find mention of a venereal malady. As keen observers as Columbus and his Spaniards would certainly have noticed any eruption or lesions on the naked bodies of these islanders had it existed, and Columbus would surely have noted it down in his journals.

Furthermore, later John and Sebastian Cabot in 1497, Caspard Corte in 1500, Jacques Quartien Champlain, Walter Raleigh, John Smith, Ponce de Leon, and all the others who visited this New World and gave thorough descriptions of the inhabitants from many aspects did not mention this malady. Their description of the physical, moral and civic life of the inhabitants are so thorough and convincing that later travelers found little to add or to modify. Is it plausible to suppose that they overlooked so important a factor?

I shall answer these questions from the standpoint of immunity. Is it not possible that the natives, after many centuries, developed so great an immunity to the spirochetal infection that their bodily reaction was too slight to become noticeable except by a painstaking examination? This is supported by the fact that syphilis is comparatively uncommon now among the American Indians, and occurs only in a very mild form. The Europeans, however, developed a severe reaction from the spirochetal infection—for their soil was a virgin one. Think of the ravages that the tubercle bacillus is causing among the American Indians, because the disease is comparatively new among them. Practically 35 per cent. of them die from tuberculosis when they once acquire the disease, whereas the mortality from tuberculosis is very small in a race like the Jews, which has been host to the tubercle bacillus probably for many centuries.

Roy Diaz de Lala, an Andalusian physician, asserts that he treated some of Columbus' company for syphilis, the symptoms of which appeared among the crew before the shores of Spain were reached.

In studying the French historical literature of the fifteenth century, we find that Jean de Saint Gelais made no mention of the disease in his "Histoire de France de 1270 a 1510"; nor does Commynes speak of it in his Chronique de Charles 8me (1528). However, the contemporary of Charles 8me and Louis 12me, Jean Louchet (1476-1557), in his "Les Annales d'Aquitaine, feictz et Gestes en sommaire des roys de France et d'Anglettere," Poitiers, 1524, says: "Au retour dudict voyage

de Naples pleusiers Gentilz hommes et autres vindrent infectz et maculez d'une maladie de laquelle on n'avait jamais parler en France, qu'on appela la maladie de Naples parce qu'ilz l'apporterent dudict."

It can be seen, therefore, that as soon as the "mal de Naples" as it was called in France, or the "mal francais" or "morbus gallicus" as it was called in Germany, appeared, the historians everywhere took note of it and described it. One then asks: Why has none of the historians or commentators ever mentioned the disease before?

COLUMBUS' RETURN AND THE OUTBREAK OF THE EPIDEMIC

Columbus arrived at Palos, in Andalusia, after his first voyage to the New World, on March 13, 1493, having previously landed at Lisbon on the sixth and having visited the Portuguese king at Valparaiso; while Pinzen, the commander of the remaining vessels reached the French port of Bayonne at about the same date. Possibly one focus or center for future spread and dissemination of syphilis was left in this French port by Pinzen's crew, if they brought the infection with them; but proof to substantiate this is not to be found. Columbus reached Spain, after his second voyage, in April, 1496.

The new malady was first distinctly recognized during the period that Charles VIII of France occupied the city of Naples, or rather immediately after he left that place. The cases of the disease that had appeared previously had not occurred in such numbers or in such severity as to excite any marked degree of attention from physicians or from the public. Naples was the locality in which the contagion first was so extensive and overt as to be considered almost the source of the new epidemic; and further, since this happened at the precise date of the visit of the French army, it seems, as has been suggested by various authors, that each nationality considered the other to be the source of the disease. This is evidenced by the name respectively conferred at the time on the new affection by the Neapolitans and French. For while the French designated it at its first commencement among them the Neapolitan disease, the Neapolitans termed it the French disease, believing that it had been brought to them by the victorious army of France. The date of Charles' sojourn in Naples is well known. His army, in the march through Italy, arrived at Rome on Dec. 4, 1494, and entered Naples Feb. 21, 1495, or nearly two years after Columbus' return from his first voyage. After remaining there three months, they vacated the city on May 20; but the last remains of the French army did not reach France until the end of the following year.

On March 13, 1493, as I mentioned above, Christopher Columbus returned to the port of Palos in Portugal with eighty-two sailors and nine Indians. Columbus' companions remained in their country until

the beginning of 1495. It seems hardly conceivable that these men could have brought a disease to Italy which prevailed there during the preceding year. It is also difficult to conceive how ninety-one men, admitting that every one of them was infected by the spirochete, could have in so short a time infected so many women as to cause so universal an epidemic. Furthermore, according to Fulgose, the disease prevailed in 1492, two years before the French marched out against the Neapolitans, but not in the form of an epidemic and only as sporadic cases.

Oviedo, in his history of the West Indies, published in 1545, claims that syphilis originated in America. He says that when Columbus returned from his second expedition in 1496, his men enlisted under Consalve de Cordova to fight the French. These troops, he claims, communicated the disease to the French and Neapolitans. But it is known that syphilis broke out in Naples two years before the second arrival of the Spanish fleet. This testimony is, therefore, incorrect.

Furthermore, how can one blame several infected men for the spread of an epidemic which arose simultaneously in several different places far apart? This does not seem credible when one considers the slow methods of travel that existed in those days.

Sprengel says at the beginning of the summer of 1493 that this new malady reigned in Auvergne and at the same period in Lombardy. Then this disease became manifest in Halle, in the Duchy of Brandenbourg, in Brunswick and in Mecklenbourg. At the same period it became manifest in Westphalia, on the shores of the Baltic, in Pomerania and Prussia, on the banks of the Rhine and in Bavaria and France.

The edict of the Aberdeen council concerning this new malady was passed on April 23, 1497, that is, four years and thirty-eight days after the date of Columbus' first return to Spain, while the famous ordinance of the Parisian authorities regarding syphilis was issued on March 6, 1497, only forty-eight days before that of Aberdeen.

An edict against the blasphemy (edictum in blasphemos) was published on Aug. 7, 1495, in Worms, Germany. Therein it is mentioned that as a result of their ill conduct and blasphemy, a new and terrible disease is visiting mankind. The great German historian Karl Sudhoff [5] interprets this as a reference to syphilis.

In the city of Freiberg in Breisgau, under the date of Sept. 16, 1496, mention is made of crusades or religious processions to combat the plague, which they then called rat syphilis.

In 1496, as a result of the rapid spread of the morbus gallicus, the senate of the city of Nürnberg, after consultation with physicians, passed certain acts designed to prevent the spread of this terrible malady.

5. Sudhoff, Karl: "Der Ursprung der Syphilis;" "Die Geschichte der Medizin."

It is interesting to note that this was probably the first attempt at syphilitic prophylaxis. Syphilitic persons were kept out of bathhouses (public), barber shops, ale houses and hotels, as it was recognized that the disease might be spread by using the same shaving instruments and sleeping in the same bed as the syphilitic person.

All of these edicts and proclamations are simply proof of the fact that a rapidly spreading epidemic of a highly contagious disease broke out in Europe in 1495, but we have no proof that this epidemic was necessarily due to syphilis.

The symptoms of this epidemic disease as described by Pintor, Delphini, Aquilla and Fracastorius were as follows: "It began with a pustular eruption on the face, accompanied by generalized pain throughout the body; a continuous fever; and the disease was communicated not only by venereal acts but also by handling the patients."

This question now arises: If the disease manifested itself in such a severe state at that time, how was it possible for Columbus to spend months and cross the Atlantic with a crew suffering so terribly? Furthermore, would not the historians have noted it on the sailors, for surely great crowds of distinguished personages and learned men must have been present on the occasion of the landing of Columbus.

Ivan Block, in his "Origin of Syphilis" says:

> The Swiss contingent of soldiers which Charles 8th left in the kingdom of Naples consisted of 1,500 men. Most of them perished in Naples from the morbus gallicus or maladie de Naples, and only 148 men returned home; in other words, there was a mortality of 90 per cent. The remaining 148 men introduced the disease into Switzerland.

From our present knowledge of syphilis, we cannot understand how so many men could have died from syphilis, since we know that syphilis usually kills by its prolonged and chronic action on the organs, and death rarely occurs in the acute stage. Or shall we say that mankind was not acclimated to the toxin and therefore succumbed quickly, just as the tuberculosis bacillus rapidly kills the American Indians? If this were true, then we may be justified in the assumption that syphilis really did not exist in Europe until the end of the fifteenth century, and that the syphilitic virus and toxin, as soon as it came in contact with virgin soil, caused fatal and most disastrous results.

But it has not yet been proved that the epidemic was due to syphilis; or perhaps in this epidemic several diseases were involved. According to Schelly, the epidemic disease spread not only by contact, but by mere presence in the same room or by the exhalation. It is possible, as Melchior Robert and Ricord say, that the epidemic consisted at the same time of cases of syphilis, smallpox, typhus fever, leprosy and

especially glanders; and it is interesting to note that glanders among horses was first observed in 1494, and that it killed many horses during the siege of Naples.

In view of the evidence presented, it seems logical to assume that the epidemic which broke loose in Europe was not due to syphilis. It is not unlikely, especially in view of the protean manifestations of the epidemic, that more than one disease was raging at the same time. The occurrence of the epidemic following the return of Columbus was purely accidental. It is possible, however, that some of the victims were suffering from syphilis, which they contracted from Columbus' crew.

I shall now state briefly some of the views commonly held regarding the origin of syphilis in America and also some opinions, no longer held to be valid, as to how syphilis came to be transferred to the European continent.

Sydenham, Haller, Haward and Sprengel believed that yaws was the original form in which syphilis appeared, and as such we must look on Africa as the fatherland of the disease. Sydenham supposed that the venereal disease was an original one in Hispaniola, or any of the West Indies, but that it was imported there by the negroes whom Spaniards carried from the coast of Guinea to the American settlements, and that syphilis was a common disease among the negroes of Africa. If this is true, then the idea that the Spaniards contracted the disease in the West Indies in 1492 must be refuted, for no slaves were transported from Africa to the West Indies until 1503.

Swedianur and Beckmann believe that syphilis originated in East India, and that the disease dschossam, or Persian fire, is the original form of it. Shaufus agrees with them, and states that the gypsies then transported it from East India into Europe.

Dr. Wizmann expresses the view that the disease arose in the second century in Dacien. This place was transformed under Trajan rule into a Roman colony. The disease was subsequently spread to Europe by the Roman soldiers.

Judge Wickersham writes: "If the natives of Eastern Asia had been afflicted with syphilis in pre-Columbian days, there is no question of its possible journey to America, by way of the Behring sea, for we have records of hundreds of Japanese wrecks on this (Pacific) coast. It seems, he adds, that our ethnologists are coming to the theory of the Asiatic origin of our Indians very fast. I do not see how they could do otherwise." A point in favor of this view is that when East-Asiatic syphilis—the syphilis of Japan—is inoculated in virgin European blood, it produces a type as malignant as that which developed in Europe in 1493, following the supposed transference of it by the crew of Columbus from the ancient races of America to Europe.

CONCLUSIONS

After thoroughly studying the data presented and weighing the evidence both qualitatively and quantitatively, I arrived at the following conclusions:

1. Syphilis did not exist in the Old World before 1493, except perhaps in Eastern Asia, and particularly along the Pacific coast.

2. Syphilis did exist in America before Columbus arrived there.

3. The origin of syphilis in America could perhaps be traced by way of the Behring sea from Japan or from any other part of Eastern Asia.

4. Syphilis was imported into Europe from the New World by the crew of Columbus in 1493.

5. The epidemic that was raging in Europe following the return of Columbus was due either to some disease or diseases other than syphilis or to syphilis plus the other diseases, syphilis however playing a minor rôle in the ravages resulting from the epidemic.

LEUKONYCHIA STRIATA

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Two years ago, in a complete article, Rosenau [1] described certain minor and temporary deformities of the nails following rheumatic fever. The changes consisted of small depressions in the body of the nails, varying in size from that of a pinpoint to that of a pinhead. He observed as many as twenty in one nail as they progressed from the lunula to the free edge, when they disappeared. He noticed also transverse furrows and longitudinal grooves in the same disease. These alterations could be related likewise to scarlet fever, Hodgkin's disease, empyema, typhoid fever, trauma and thrombo-angitis obliterans, but by far the greater number occurred after rheumatic fever. They were usually seen immediately after the disease, although occasionally the defects were noticed some years later.

These depressions and furrows are apparently of the same nature as the white spots or flecks which are of every-day occurrence, but definite white striations or bands are comparatively rare. These comprise the leukonychia striata of the dermatologist.

Leukonychia, or canities unguium, consists in the loss of the normal pink color of the nail, which becomes white. The most common type of whitening of the nail is leukonychia punctata—the frequent white spots which appear and disappear in the nails of most persons. Other types are those involving the whole nail (leukonychia totalis) and those causing distinct regular or irregular transverse white lines across the nail (leukonychia striata).

Anatomically, leukonychia striata is said to be due to a lack of keratinization of the growing nail, with an inclusion of air in its tissue, which renders the thinned nail opaque or white. When the opacities occur with considerable diminution of local growth, the nail is thinned; at the same time, these defective areas assume a white appearance. This is not so commonly seen as the two conditions separately. Both the lack of keratinization and the opacities are, therefore, to be distinguished from the other irregularities in the nail which are grouped under the head of onychauxis, which is an overgrowth of the nail in various forms, a marked one of which receives the name of onychogryphosis.

White striate opacities of the nail have been described in connection with relapsing fever, typhoid fever, multiple peripheral neuritis, toxic

1. Rosenau, W. H.: Changes in Finger Nails After Rheumatic Fever and Tuberculosis, J. A. M. A. **78**:1783-1787 (June 10) 1922.

Condition of finger nails sixty-seven days after ileostomy.

gastro-enteritis, arsenic poisoning and frost-bite.[2] The white spots of leukonychia punctata are often associated with trauma, and may be artificially produced by such a local trauma near the nail matrix as accompanies the vigorous treatment sometimes given by a manicurist. They are seen after fractures of the bones of a limb and register accurately the date of injury. It has been suggested that in these cases of direct or of slightly remote injury the small capillaries become thrombosed and the nail consequently is deprived of its nutrition over an area sufficient to induce macroscopic changes.

The striate form is an exaggerated form of the spots and a milder form of whatever damage produces the depressions and furrows. Sir Samuel Wilke, who had these lines and furrows after sickness, writes: "My opinion is that the furrow and white line on the nails show the line of death or approaching death . . . if he (the patient) should fortunately recover, the sign of death is written upon him."

The illustration shows the fingers of a patient with a typical history and definite symptoms of chronic ulcerative colitis, on the sixty-seventh day after ileostomy. Since operation, the patient has gained 40 pounds (18 kg.) in weight.

There is a definite transverse white band, several millimeters in width. Although not so well demonstrated in the illustration, the nail distal to this band was thinner and pinker than that proximal to the band. This indicates that the nail assumed a different growth after becoming marked by the striation. If the average growth of the nail is 1 mm. in a week, the white band in these nails represents about from three to five weeks' growth, starting just at the time of the operation for ileostomy, since it is placed just beyond the middle of the nail, which grows to its full length in 120 days. The abdominal operation in this patient caused a change in the general nutrition of the body, which was registered in the nails, the band representing a trauma which was local and due to the general circulatory or nutritional upheaval which lasted from three to five weeks. The nails of all the fingers of both hands are regularly and similarly striated and the toe nails also show these markings, but not so vividly.

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2. Weber, F. Parkes: Internat. Clin. **1**:108-130, 1918.

TELANGIECTASIA

A NEW METHOD OF TREATING THIS CONDITION WITH CAUTERY

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With the advent of the roentgen rays as a therapeutic agent in medicine, a new, troublesome dermatologic condition came into existence. I am referring to the roentgen-ray atrophy of the skin, with its accompanying pigmentation and telangiectasia. With the present knowledge and better technic, it is to be hoped that these cases will occur with less frequency in the future than they do at present. However, there will always be enough of them to worry the dermatologist as long as the roentgen rays are used by the advertising quack and chiropractor. A case recently presented at the dermatologic section of the Academy of Medicine illustrates what is taking place. The patient was treated for hypertrichosis, and received no less than fifty roentgen-ray exposures, with the result that the skin of the entire face became atrophic and covered with telangiectasia.

The treatment of this condition, as well as telangiectasia from other causes, such as rosacea and telangiectatic nevus, is at present limited to two methods, the electrolysis needle and the Kromayer lamp. The results obtained with the latter are not gratifying, while the electrolysis needle is painful and the treatment prolonged. When a large area is involved, it may take many months before any improvement can be seen.

I have seen a method of treating these conditions in Zumbusch's clinic in Munich, which, I believe, is deserving of universal adaptation. It has the advantage of being practically painless—it does not produce the blistering and crust formation, as is the case with the Kromayer lamp—and an area as large as a silver dollar can easily be cleared in one sitting.

The method consists in producing a local anesthesia by means of cataphoresis and in coagulating the dilated vessels by means of a specially constructed cautery electrode.

For the anesthesia, a solution of cocain and epinephrin is prepared in a soda-free glass container. This is important, as alkalis in the glass in which the liquid is kept will interfere with cataphoresis of the drugs dissolved in it. A metal electrode about 3 by 4 cm. is used. Its flat surface is padded with about 0.5 cm. thickness of gauze. The latter is moistened with the cocain-epinephrin solution, connected with the posi-

tive pole of a galvanic battery, and applied to the area to be treated. The negative electrode is best made of some flexible metal so that it can be molded to fit the part to which it is applied. It should be much larger than the positive electrode. A lead plate 7 by 14 cm. will serve the purpose. This is well padded with gauze, moistened with water, and bandaged snugly to the forearm. A current of 2 milliamperes is turned on and kept up until the skin becomes less sensitive, when it is gradually increased to 10 or more milliamperes, depending on the sensitiveness of the skin and the depth of anesthesia desired. A work-

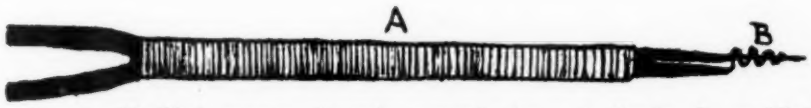

Fig. 1.—Modified cautery electrode, natural size. *A*, shank; *B*, modified platinum point.

Fig. 2.—Electrode with cords attached and cork handle. *C*, cork handle; *E*, portion of platinum electrode through which no current passes; *D*, tips of conducting cords into which fit the two limbs of the electrode and which are held by means of thumb screws.

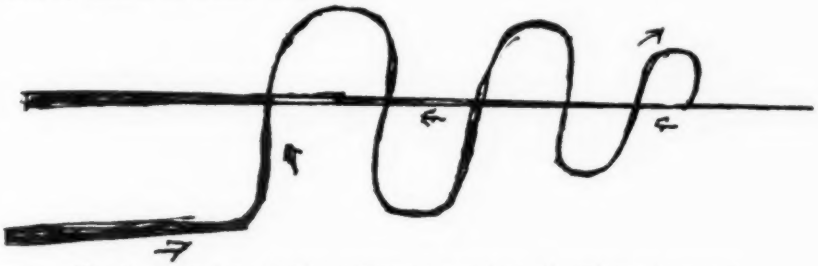

Fig. 3.—Spiral and point enlarged, showing direction of current.

able anesthesia is usually produced within about ten minutes. The skin becomes blanched, and the blood vessels stand out as red streaks on a perfectly white background.

The instrument used for the destruction of the telangiectatic vessel is a modified cautery electrode. It is of ordinary construction, except that the platinum loop is in the form of a spiral (Fig. 1), from which projects a point about 7 mm. in length (Fig. 2, *E*). The construction of the loop is as follows. One of the limbs is straight and ends in a point, while the other winds about the first in the form of a spiral.

ending at a point 7 mm. short of the end of the first limb (Fig. 3). There they are fused. The current passes from one limb through the spiral and back, never reaching the end of the electrode. Though the spiral may be white hot, the point is comparatively cool and retains its normal color, at least for some distance. The reason for this is that the point receives only transmitted heat. No cautery handle is used, but the cords are clamped directly to the cautery electrode (Fig. 2, *D*). A cylindrical cork is hollowed in its axis, and the electrode is pushed through it. In this manner, the cork is made to fit tightly about the shank of the electrode (Fig. 2, *C*). The instrument is easy to handle because of its lightness. More important is the fact that the length of the electrode between the hand of the operator and the skin of the patient is not fixed, but can be regulated at will. This makes it possible to touch the vessel with the point of the electrode very lightly by utilizing a swinging motion from the wrist. Care must be taken not to pierce the skin. The vessel coagulates from the heat, and a dark brown streak remains. This soon turns into a fine linear crust which falls off in about ten days. The cosmetic result is very good, in spite of the fact that the hyperpigmentation, the depigmentation and the atrophy remain.

1955 Grand Concourse.

SODIUM CHLORID IN THE TREATMENT OF BROMISM *

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Skin eruptions are fairly common manifestations of bromism, and although several interesting theories have been advanced, nothing is yet known regarding the reason for their appearance. Bromids are excreted very slowly from the body, and the tendency to accumulation explains the slow regression of the bromodermas, even after the drug is stopped. Nervous symptoms, occasionally of an alarming nature, also occur in bromism. Any remedy which would hasten the excretion of bromid should be welcome.

In an article by Wile, Wright and Smith,[1] the fact that bromid ingestion hastened the elimination of chlorids in the urine was stressed, and the suggestion made that the process might be reversible; that is, that stored up bromids in the body might be "pushed out" by the mass action of relatively large amounts of chlorid administered.

In a later article, Wile[2] reported three cases of bromism in which the patients were treated by intravenous injections of decinormal sodium chlorid solution, with the result that bromids were detected in the urine when none had been present before. Rapid regression of the skin lesions and improvement of the nervous symptoms were noted.

As the textbooks advise the use of diuretics in the treatment of patients with bromism, the thought suggested itself that possibly the results obtained by Wile were simply due to diuresis. With this in mind, and to duplicate Wile's work quantitatively, a case of bromism treated by the new method is reported. To determine whether sodium chlorid administered by mouth would not accomplish equally good results, an experiment performed with the author as subject is also reported.

Mrs. L. C., aged 34, a housewife, entered the hospital, Feb. 16, 1925. On both legs she had a number of the warty looking, nodular lesions so characteristic of bromoderma, as well as a number of pustules. For twenty-eight days she had been "nervous" and had taken daily 45 grains (2.8 gm.) of a mixture of potassium, sodium and ammonium bromids. She first noticed the skin lesions

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* From the Department of Dermatology, Massachusetts General Hospital

1. Wile, U. J.; Wright, C. S., and Smith, N. R.: A Preliminary Study of the Experimental Aspects of Iodid and Bromid Exanthems, Arch. Dermat. & Syph. **6**:529 (Nov.) 1922.

2. Wile, U. J.: Further Contributions to the Experimental Aspects of Iodid and Bromid Exanthems, Arch. Dermat. & Syph. **8**:407 (Sept.) 1923.

about two weeks after commencing to use the bromids. Examination revealed no other abnormality, except an infantile type of uterus.

Twenty-four hour samples of urine were collected, and examined for bromid in the following manner: the urine was evaporated to 150 c.c., and to it were added 6 gm. of potassium permanganate crystals and an excess of concentrated sulphuric acid. This was gently heated, and any escaping bromin collected in chloroform, which it colored yellow. The same procedure was carried out, using a known amount of sodium bromid dissolved in water. The two samples of bromin dissolved in chloroform were colorimetrically compared, and the amount of bromid actually present in the urine calculated.[3] The results are embodied in Table 1.

TABLE 1.—*Amount of Bromid in Urine of Patient*

Date	Treatment	Amount of Bromid in 24 Hour Amount of Urine, Gm.
Feb. 17	None	0.007
Feb. 18	300 c.c. of 0.6 per cent. sodium chlorid solution intravenously	0.021
Feb. 19	None	0.000
Feb. 20	Tonsils removed, and urine not examined	.....
Feb. 21	420 c.c. of 0.6 per cent. sodium chlorid solution intravenously	0.015
Feb. 22-24	None	0.000
Feb. 25	60 grains of diuretin plus forced fluids	0.000
Feb. 26	None	0.000
Feb. 27	60 grains potassium citrate plus forced fluids	0.000

TABLE 2.—*Amount of Bromid in Experimental Case*

Date	Treatment	Amount of Bromid in Urine, Gm.
March 17	None	0.000
March 18	60 grains of sodium chlorid in salol coated tablets at 7 a.m.	7 to 9 a.m. 0.000
		9 to 11 a.m. Trace
		11 a.m. to 1 p.m. 0.022
		1 to 3 p.m. 0.013
		3 to 5 p.m. 0.005
		5 to 7 p.m. 0.005
		7 p.m. to 7 a.m. 0.040
March 19	30 grains sodium chlorid salol coated tablets at 8 a.m., a single specimen of urine at that time showing no bromid	8 a.m. to noon. 0.000
		Noon to 2 p.m. Trace
		2 to 4 p.m. 0.013
		4 to 6 p.m. Trace
		None thereafter
March 20	120 grains sodium chlorid salol coated tablets at 8 a.m.	8 a.m. to noon. 0.000
		Noon to 2 p.m. 0.010
		2 to 4 p.m. Trace
		None thereafter
March 21	None	0.000

The patient at this point insisted on leaving the hospital, as marked regression of the skin lesions had occurred.

Due to the premature departure of the patient, it seemed that diuresis as the explanation of the hastened bromid excretion was still a possibility. Therefore, I took 60 grains (3.8 gm.) of sodium bromid daily for ten days. During this time and for two days afterward, no bromid or mere traces appeared in the urine. A marked diuresis was then produced with potassium citrate and an abundance of fluids, but bromid did not appear in the urine. The use of sodium chlorid in salol coated tablets was then commenced, and two hour specimens of urine collected during the day, the night urine being collected as a single sample. The further course is embodied in Table 2.

3. Suggested by R. E. Ellsworth, M.D., and Fuller Allbright, M.D.

Table 2 shows that the excretion of bromid occurred most rapidly from the fourth to the eighth hour after taking the sodium chlorid in salol coated tablets, and that within twenty-four hours the chlorid would have to be repeated to obtain constant benefit. The rapid decline in the amount of bromid excreted under this therapy, even when larger doses of sodium chlorid were taken, indicate that the acceleration of bromid excretion is marked.

As intimated in Wile's article, this therapy would possibly also be beneficial in iodism. The only contraindication to its use is impaired renal function.

CONCLUSIONS

Sodium chlorid given in appreciable amounts intravenously or by mouth hastens the excretion of bromid from the body. This action is not due to diuresis, but to the chlorid replacing bromid by mass action. If given by mouth, sodium chlorid may well be administered in salol coated tablets or pills, 60 grains once a day. The bromodermas rapidly regress under this treatment.

Nephritis is a contraindication to this therapy.

STUDIES ON HAIR, WITH SPECIAL REFERENCE TO HYPERTRICHOSIS

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VIII. GENERAL ASPECTS OF THE HAIR PROBLEM

A cursory survey of available information on the pilary system suffices to show that our knowledge of hair is deficient in many respects. Even in its anatomy and embryology there are a number of points that have not been cleared up. There is nothing but speculation concerning the phylogeny of hair. Its comparative anatomy in the mammals is better understood, although even here there are important problems that remain to be solved. Racial differences in hair have been much studied, and there is a considerable volume of literature relating to this phase of the subject, but much of it is of a superficial character with little real value. The weakest place in the whole field, with the possible exception of questions of phylogeny, is in the understanding of the factors regulating growth, either normal or abnormal. It is scarcely an exaggeration to say that next to nothing is known on this phase of the subject.

A summary of the present status of knowledge relating to any other important system or organ of the body might be stated in much the same terms. Certain types of vital processes are easily demonstrable while others are especially baffling. Peculiarly difficult to understand is the phenomenon of growth and differentiation, no matter in what structure it is observed. At present nearly all questions in the field of biologic studies lead ultimately to the same fundamental problem as to the meaning and regulation of the changes involved in growth processes. Probably no system is better suited to the study of these processes than the pilary system, in which the individual hairs each represent easily accessible structural and functional units which may be observed and subjected to experimental treatment, or even excised, without serious inconvenience to the subject.

An attempt has been made in the foregoing discussion to indicate what seem to be some of the outstanding problems relating to hair. In the field of morphology and phylogeny, new light on the relation of hair to other dermal appendages would be most welcome. The idea of partial homologies, which it was ventured to suggest in the first chapter, may help in formulating new hypotheses and in planning new modes of attack. In all of these various aspects, the questions relating to hair are fundamentally the same as those relating to the skeleton, or to any other system. In the relation of different types of hairs to each other, the

problem is presented of determining whether controlling factors that regulate the differences are inherent in the follicles themselves or are of a circumstantial character. This problem takes a practical form, for example, when the question arises as to the advisability of early removal of superfluous hair. Particularly important would seem to be an understanding of hair groups. If these groups should be shown to have a morphologic unity and the hairs composing them to be related among themselves in a definite way, considerable advance toward an understanding of what are now some of the most puzzling problems would have been made.

The more accurate determination of normal sexual and racial differences in hair, not only of the head but of other parts of the body, will no doubt aid materially in an understanding of the variations encountered in any restricted group of subjects. Such aphorisms as "the negro is only a pathologic white man, and vice versa" are not wholly without grains of truth. For the anthropologist no less than for the student concerned only with the problem of growth, it is important that wherever possible pieces of skin be obtained with the hair on it so that the relations of the follicles and hair shafts can be checked against each other. One technic for handling hair-bearing skin is described by Bischoff. For examining individual hairs, some kind of a hair rotator or device for turning the hair under a lens is almost indispensable, since an erroneous idea of hair form might easily be obtained from hairs mounted in the usual manner. A Zeiss "Kapillarrotator" is described as a small glass tube into which the hair is drawn before being dipped in xylol and mounted. The tube with the contained hair can then be turned as desired. Hausman's hair rotator consists of two fine wires with loops at either end for holding the hair. These wires are passed through corks which are carefully centered, and cemented to a glass slide. In this laboratory, a metal attachment to the stage of a microscope was devised, with supports on either side to hold a slender rod with milled screw heads at the end. A section of the rod is cut away in the middle and provision made for attaching a hair by means of clips in the geometrical axis between the cut ends of the rod. Such an apparatus enables one easily to get the measurements for determining hair indexes or to study variations in the configuration of the shaft. With reference to the general arrangement of hair, a better method than has yet been described for determining and indicating the amount and types of hair in a given region is desirable.

The number of problems relating to the growth of hair under normal or controlled conditions are rather numerous, and it is evident that, unlike some other lines of investigation, further progress here does not wait on new methods or new points of view. Patience and accuracy of

observation should suffice to clear up a number of points which are still unsettled. For the solution of other of these problems, a certain amount of genius may also be necessary. The questions that arise with reference to aberrant growths are essentially the same as those which present themselves to the student of normal growth. But in connection with the former, there are always special conditions or circumstances which often seem to carry some hint as to the nature of underlying factors. A number of problems suggested by such conditions as monilethrix and by alopecia and hypertrichosis have already been discussed. In regard to the latter, the importance of anatomico-anthropologic data might again be emphasized. Much light would be thrown on certain manifestations of this condition if it could be determined whether or not the actual number of hair follicles to a group is increased, and if such regions as the middle of the fingers, which may or may not have hair in normal subjects, show any tendency to respond to the factors for hypertrichosis or alopecia. In other words, it is desirable to know what conditions, if any, are due to alteration in the production of follicles, and what to alteration in the function of follicles already produced. From a theoretic point of view, it would be of great interest to know whether one and the same factor could operate in both ways. To mention one or two other points, it would help materially in the understanding of hair growth if it could be determined whether or not all down hairs have the potentiality of becoming terminal hairs; and, if such should happen to be the case, whether a follicle that has once been stimulated by endocrine or other factors to produce terminal hair will continue to do so in the absence of the initial stimulus or will revert to its previous condition. The sympathetic nervous system and the endocrine glands will probably be found to have a relation to hair production comparable to the relation which they have to most other developmental processes.

From time immemorial man in general has been dissatisfied with certain details of his pilary system. In races with a growth of beard slight enough to make the procedure feasible, the hairs were doubtless pulled out long before the invention of razors or other means of temporary depilation. Ancient records indicate that women of many countries have at times resorted to the custom of partially removing their eyebrows. Women with facial hypertrichosis have no doubt always wished to be rid of their superfluous hair. As yet, however, no entirely satisfactory method of eliminating undesirable hairs has been devised. In some cases they are allowed to remain, lest disturbing them should increase their growth. When not too numerous they are often pulled out. In other cases they are shaved, kept rubbed down with pumice, or removed by chemical methods. Clinically, radium and the roentgen ray have been employed, but the reports indicate that the dosage is too

uncertain and the results too variable to give much hope from these procedures. The electric needle is generally proclaimed as supplying the most satisfactory means that has been thus far devised for permanently removing hair. This clever device is due to the ophthalmologist, Dr. Charles Michel of St. Louis, who first employed it about 1875 for removal of ingrowing eyelashes. The principle of electric depilation involves the killing of the active part of the follicle and bulb by inserting a needle beside the shaft and passing through it a current that will accomplish this result with the least possible injury to the surrounding tissues. The method is painful, slow, and in many cases only partially effective. Its use seems to be avoided as much as possible by all but specialists in this particular line. The lack of a good means of permanently destroying the hair, the inconvenience and uncertainty as to the effect of depilatories containing barium sulphid or other keratin solvents, and the complete ignorance of how to control hair growth leaves the practical phases of the hair problem in a rather unsatisfactory state. This is well brought out in a recent review by Lowenstein, whose summary of the literature for the last ten years shows how slight is the progress that has been made in that time.

The bibliographic list which follows indicates only a small fraction of the matter relating to hair in its different phases. The books and articles included were selected either because they present material bearing directly on the points discussed here or because they contain good references to the literature. A few titles are included because of their incidental or historical interest.

BIBLIOGRAPHY

Alberti, A.: Kasuistik zur Hypertrichosis universalis acquisita mit Veränderungen der Sexualorgane, Beitr. z. Geburtsh. u. Gynäk. **9**:337-344, 1905.

Bartels, Max: Ueber abnorme Behaarung beim Menschen, Ztschr. f. Ethnol. **8**:110-129, 1876; **11**:145-193, 1879; **13**:213-233, 1881.

Bean, Robert Bennett: Heredity of Hair Form Among the Filipinos, Am. Naturalist **45**:524-536, 1911.

Beard, J.: The Nature of Teeth in the Marsipobranch Fishes. Morphological Studies. III, Zool. Jahrb. **3**:727-752, 1889.

Bertillon, J.: Sur l'examin d'un negre au point de vue de l'implantation des cheveux, Bull. Soc. d'anthrop. de Paris, 1878, pp. 94-98.

Biedl, Artur: The Internal Secretory Organs, Trans. by Linda Forster, New York, William Wood & Company, 1913.

Bischoff, C. W.: Histologische Untersuchungen über den Einfluss des Schneidens der Haare auf ihren Wachstum, Arch. f. mikr. Anat. **51**:691-703, 1898.

Bodin, E.: Poils (Maladies des), La pratique dermatologique, Paris, Masson et Cie **4**:1-37, 1904.

Bonnet, Robert: Ueber Hypotrichosis congenita universalis, Anat. Hefte **1**:233-273, 1892.

Botezat, E.: Die Nervendigungen an den Tasthaaren von Säugethieren, Arch. f. mikr. Anat. **50**:142-169, 1897.

Die Apparate des Gefühlssinnes der nackten und Behaarten Säugetierhaut, mit Berücksichtigung des Menschen, Anat. Anz. **42**:273-318, 1912.

Phylogenese des Haares der Säugetiere, Anat. Anz. **47**:1-44, 1914.

Branca, A.: Sur la structure du poil, Journal de l'anat. et physiol. **47**:545-600, 1911.

In Poirier and Charpy: Traité d'Anatomie Humaine 5, pt. 2, Article IV.

Brandt, Alexander: Ueber die sogennanten Hundmenschen, beziehungsweise Hypertrichosis universalis, Biol. Centralbl. **17**:161-179, 1897.

Ueber den Bart der Mannweiber (Viragines), Biol. Centralbl. **17**:226-239, 1897.

Zur Phylogenie der Säugetierhaare, Biol. Zentralbl. **20**:572-592, 1900.

Broman, Ivan: Ueber rudimentäre Hautorgane beim menschlichen Embryo und über die Phylogenese von Milchdrüsen und Tastharren, Verhandlungen der Anatomischen Gesellschaft **29**:27-37, 1920.

Browne, Peter A.: Trichologia Mammalium; or a Treatise on the Organization, Properties and Uses of Hair and Wool; Together with an Essay upon the Raising and Breeding of Sheep, Philadelphia, J. H. Jones, 1853.

Brunn, A. von: Haut (Integumentum commune), Bardeleben's Handb. d. Anat. d. Menschen **1**, 1897.

Burrows, Montrose T.: The Significance of the Lunula of the Nail, Anat. Rec. **12**:161-166, 1917.

Cady, Lee D., and Trotter, Mildred: A Study of Ringed Hair, Arch. Dermat. & Syph. **6**:301-317, 1922.

Castle, W. E.: Heredity of Coat Characters in Guinea-Pigs and Rabbits, Carnegie Inst. Wash. **23**:1-76, 1905.

Chiari, H.: Ueber Hypertrichosis des Menschen, Prag. Med. Wchnschr. **15**:495-497, 512-515, 1890.

Clark, Elbert, and Lhamon, Rushkin, H.: Observations on the Sweat Glands of Tropical and Northern Races, Anat. Record **12**:139-147, 1917.

Danforth, C. H.: Distribution of Hair on the Digits in Man, Am. J. Phys. Anthrop. **4**:189-204, 1921.

Danforth, C. H., and Trotter, Mildred: The Distribution of Body Hair in White Subjects, Am. J. Phys. Anthrop. **5**:259-265, 1922.

Darwin, Charles: The Descent of Man and Selection in Relation to Sex, Rev. ed., New York, D. Appleton & Company, 1896.

Davenport, Charles Benedict: Heredity in Relation to Eugenics, New York, Henry Holt, 1911.

Davenport, Charles B., and Love, Albert G.: Army Anthropology, Statistics in Medical Department of the United States Army in the World War, Gov. Printing Office, **15**, 1921.

Davenport, Gertrude C., and Davenport, C. B.: Heredity of Hair Color in Man, Am. Naturalist **43**:193-211, 1909.

Davies, H. R.: Entwicklung der Feder und ihre Beziehungen zu anderen Integumentalgebilden, Morphol. Jahrb. **15**:560-645, 1889.

Demieville, Paul: Ueber die Pigmentflecke der Haut, Virchow's Arch. f. path. Anat. **81**:333-355, 1880.

Deniker, J.: The Races of Man. An Outline of Anthropology and Ethnography, London, Walter Scott, 1900.

Duhring, L.: A Case of a Bearded Woman, Arch. Dermat. **3**:193, 1877. (Original not available.)

Deutsch, A.: Hypertrichosis: Ein Beitrag zur Elektro-Epilationsmethode, Zentralbl. f. d. gesamtgeb. d. Med. **4**:1-2 (No. 1), 1-5 (No. 2), 1908.

Diem, Franz: Beiträge zur Entwicklung der Schweissdrüsen an der behaarten Haut der Säugetiere, Anat. Hefte **34**:187-236, 1907.

Dupré and Duclos: La barbe chex les aliénés, 11me Congrès des aliénistes et neurologistes français, Reviewed in Ann. de Dermat. et de syph. **3**:806, 1902.

Ebstein, Erich: Hypertrichosis und Spina bifida occulta, Deutsch. Ztschr. f. Nervenh. **43**:81-92, 1911.

Emery, C.: Ueber die Verhältnisse der Säugetierhaare zu schuppenartigen Hautbilden, Anat. Anz. **8**:731-738, 1893.

Engman, Martin F.: Treatment of Acne Vulgaris with Acne Bacillus Suspensions, Interstate M. J. **17**:943-950, 1910.

Eschner, Augustus A.: A Case of Universal Congenital Atrichia, Am. J. M. Sc. **129**:622-632, 1905.

Eschricht: Ueber die Richtung der Haare am menschlichen Körper, Arch. f. Anat. Physiol. u. wisschftl. Med. 1837, pp. 37-62.

Ewart, C. T.: Hypertrichosis in the Insane, Lancet **1**:1133-1134, 1915.

Falta, Wilhelm: The Ductless Glandular Diseases, trans. and ed. by Milton K. Meyers, Philadelphia, P. Blakiston's Son and Company, 1918.

Féré, C.: Sur la queue des satyres, Nouv. iconog. de la Salpêtrière **3**:45, 1890.

Fischer, E.: Ein Fall von erblicher Haararmut und die Art ihrer Vererbung. Ein Beitrag zur Familienanthropologie, Arch. f. Rassen- u. Gesellsch. Biol. **7**:50-57, 1910.

Frédéric, J.: Untersuchungen über die Sinushaare der Affen, nebst Bemerkungen über die Augenbrauen und den Schnurrbart des Menschen, Ztschr. f. Morphol. u. Anthrop. **8**:239-275, 1905.

Untersuchungen über die Rassenunterschiede der menschlichen Kopfhaare, Ztschr. f. Morphol. u. Anthrop. **9**:248-324, 1906.

Friedenthal, Hans: Beiträge zur Naturgeschichte des Menschen (Das Haarkleid des Menschen). Jena, Gustav Fischer, 1908; pt. I-IV.

Tierhaaratlas, Jena, Gustav Fischer, 1911.

Zur Technik der Untersuchung des Haarkleides und der Haare der Säugethiere, Ztschr. f. Morphol. u. Anthrop. **14**:441-452, 1912.

Fritsch, Gustav: Die Menschliche Haupthaaranlage, Berlin, Georg Reimer, 1915.

Garcia, S. Adeodato: Beiträge zur Kenntniss des Haarwechsels bei menschlichen Embryonen und Neugeborenen, Morphol. Arb. **1**:136-206, 1892.

Gegenbauer, Carl: Vergleichende Anatomie der Wirbelthiere mit Berücksichtigung der Wirbellosse, Leipzig, Wilhelm Engelmann, 1898.

Geyl, A.: Waarnemingen en Beschouningen over ongenonen Haargroei, Biol. Centralbl. **8**:332-341, 1888.

Beobachtungen und Ideen über Hypertrichosis, Dermatologische Studien, II. Hamburg, 1890; also as suppl. to Monatschr. f. prakt. Dermat. **2**:1890.

Giovannini, Sébastien: De la régénération des poils apres l'epilation, Arch. f. mikr. Anat. **36**:528-564, 1890.

Ueber ein Zeillingshaar mit einer einfachen inneren Wurzelscheide, Arch. f. Dermat. u. Syph. **25**:189-193, 1893.

Goette, A.: Zur Morphologie der Haare, Arch. f. mikr. Anat. **4**:273-322, 1868.

Gortner, Ross Aiken: On Melanin, Bioch. Bull. **1**:207-215, 1911.

Grosswer, Otto: On the Metameric Structure of the Skin of Vertebrates, J. Anat. & Physiol. **39**:lii-liii, 1904.

Halban, J.: Zur Frage der Graviditätshypertrichose, Wien. klin. Wchnschr. **20**:1389-1391. 1907.

Harabath, R.: Ueber Graviditätshypertrichosis, Gynæk. Rundschau **7**:705-706, 1913.

Hausman, Leon Augustus: Structure Characteristics of the Hair of Mammals, American Naturalist **54**:496-523, 1920.

A Micrological Investigation of the Hair Structure of the Monotremata, Am. J. Anat. **27**:463-495, 1920.

Hegar, A.: Zur abnormen Behaarung, Beitr. z. Geburtsh. u. Gynaek. **4**:21-30, 1901.

Henneberg, B.: Die Verbreitung der Sinushaare bei den Säugern und die Sinushaarreste beim Menschen, Anat. Hefte **52**:145-180, 1915.

Hoepke, Hermann: Ueber Veränderungen des Pigments—und Luftgehaltes im Haar, Verhandl. d. Anat. Gesellsch. **30**:127-133, 1921.

Hutchinson, Jonathan: Notes on the Distribution of Hair on the Human Body, Arch. Surg. **5**:325-328, 1894.

Japha, A.: Die Haare der Waltiere, Zool. Jahrb. **32**:1-42, 1911.

Jerina, Francé: Studien über die Haararmut und Haarlosighkeit bei Haustieren, Inaugural Dissertation, University of Bern, 1920.

Kahn, Richard Hans: Ein Beitrag zur Lehre von den Pilomotoren, Arch. f. Physiol., 1903, pp. 239-260.

Kaposi, Moriz: Pathology and Treatment of Diseases of the Skin, trans. under supervision of James C. Johnson, New York, William Wood & Company, 1895.

Karg, Dr.: Studien über transplantiert Haut. I. Entwicklung und Bedeutung des Hautpigments, Arch. f. Anat. u. Entwcklngsgesch., 1888, pp. 367-406.

Keibel, Franz: Ontogenie und Phylogenie von Haar und Feder, Ergebn. d. Anat. u. Entwcklngsgesch. **5**:619-719, 1895.

Keith, Arthur: The Differentiation of Mankind into Races, Lancet **2**:553-556, 1919.

Kidd, Walter: Notes on the Eyebrows of Man, J. Anat. & Physiol. **38**:iii-vii, 1903.

The Direction of Hair in Animals and Man, London, Adam and Charles Black, 1903, pp. 154.

Kingsley, J. S.: Hair and Feathers, Am. Naturalist **31**:767-777, 1897.

Comparative Anatomy of Vertebrates, Philadelphia, P. Blakiston's Son & Company, 1912.

Kohn, F. G.: Beitrag zur Kenntniss der Haut des Nachthundes, Zool. Jahrb. Abt. f. Anat. Jena **31**:427-438, 1911.

Krause, Wilhelm: Die Entwicklung der Haut und ihrer Nebenorgane, in Hertwig: Handbuch der vergleichenden und experimentellen Entwicklungslehre der Wirbelthiere, **2**:203-348, 1906.

Kren, Otto: Ueber das Vorkommen des "Trichonodosis" (Galewski), Wien. klin. Wchnschr. **20**:916-918, 1907.

Le Double, A. F., and Houssay, François: Les Velus, Paris, Vigot Frères, 1912.

Lesser, E.: Ein Fall von Hypertrichosis universalis und frühzeitiger Geschlechtsreife, Ztschr. f. klin. Med. **41**:122-129, 1900.

Leydig, F.: Zur Deutung der epidermalen Organe im Integument der Säugetiere, Arch. f. mikr. Anat. **52**:156-166, 1898.

Linzenmeier, G.: Die Vererbungsgesetze der Hypotrichosis congenita an der Hand zweier Stammbäume, Stud. z. Path. d. Entwcklung. **1**:185-196, 1914.

Little, C. C.: Experimental Studies of the Inheritance of Color in Mice, Carnegie Inst. Wash. **179**:1-102, 1913.

Lloyd, L.: Lice and Their Menace to Man, Oxford University Press, 1919.

Lowenstein, Paul S.: The Etiology of Hypertrichosis—A Review of the Literature, The Nation's Health [Modern Medicine] **3**:157-161, 1921.

Lucien, M., and Parisot, J.: Glandes Surrénales, Société d'Editions Scientifiques et Médicales, Paris, 1913.

Von Luschan, Felix.: (Ein Haarmensch) Ztschr. f. Ethnol. **39**:425-429, 1907.

MacKee, George M.: Hypertrichosis and the X-Ray, J. Cutan. Dis. **35**:171-178, 1917.

Macleod, J. M. H.: Practical Handbook of the Pathology of the Skin, London, H. K. Lewis, 1903.

McAuliff, G. R.: Hypertrichosis, Variation in Female Secondary Sexual Characteristics, and Internal Secretion, J. A. M. A. **66**:15-19 (Jan. 1) 1916.

McEwen, Ernest L.: The Problem of Hypertrichosis, J. Cutan. Dis. **35**:829-836, 1917.

Martin, Rudolph: Lehrbuch der Anthropologie in systematische Darstellung, mit besonderer Berücksichtigung der anthropologischen Methoden, Jena, Gustav Fischer, 1914.

Maurer, F.: Haut-Sinnesorgane, Feder- und Haaranlagen, und deren gegenseitige Beziehungen, ein Beitrag zur Phylogenie der Säugethierhaare, Morphol. Jahrb. **18**:717-804, 1892.

Mayet, Lucien: Contribution a l'étude de l'hypertrichose lombosacre envisage comme stigmate anatomique de la dégénéresence, Nouv. iconog. de la Salpêtrière **14**:266-273, 1901.

De Meijere, J. C. H.: Ueber Haare der Säugethiere, besonders über ihre Anordnung, Morphol. Jahrb. **21**:312-421, 1894.

Messenger, J. Franklin: The Vibrissae of Certain Mammals, J. Comp. Neurol. **10**:399-402, 1900.

Metchnikoff, E.: On the Process of Hair Turning White, Proc. Roy. Soc., London **49**:156, 1901.

Meyer-Lierheim, F.: Die Dichtigkeit der Behaarung beim Fetus des Menschen und der Affen, Ztschr. f. Morphol. u. Anthrop. **13**:131-150, 1911.

Michelson, P.: Zum Capitel der Hypertrichosis, Virchow's Arch. f. path. Anat. **100**:66-80, 1885.

Miller, Newton: Heredity of White Fore-Lock, J. Heredity **6**:165, 1915.

Morgan, T. H.: The Genetic and Operative Evidence Relating to Secondary Sexual Characters, Carnegie Inst. Wash., 1919, No. 285.

Morris, Malcolm: Piedra—A New Disease of the Hair, Tr. Path. Soc. London **30**:441-444, 1879.

Neugebauer, Franz Ludwig von: Hermaphroditismus beim Menschen, Leipzig, Werner Klinkhardt, 1908.

Oken, Lorenz: Elements of Physiophilosophy, trans. by Alfred Tulk, London, Ray. Soc., 1847.

O'Malley, Mary: Certain Pluriglandular Anomalous Functions Associated with Psychopathic Sexual Interest, J. Nerv. & Ment. Dis. **48**:1-35, 1918.

Onslow, H. A.: Contribution to Our Knowledge of the Chemistry of Coat Color in Animals and of Dominant and Recessive Whiteness, Proc. Roy. Soc., London, Series B **89**:36-58, 1917.

Oppenheimer, Eduard: Ueber eigentümliche Organ in der Haut einiger Reptilien. Ein Beitrag zur Phylogenie der Haare, Morphol. Arb. **5**:445-461, 1896.

Osborn, Dorothy: Inheritance of Baldness, J. Heredity **7**:347-355, 1916.

Paschkis, Heinrich: Ueber Hypertrichosis, Wien. med. Wchnschr. **61**: (columns) 369-373, 448-453, 1911.

Pinkus, Felix: Ueber Hautsinnesorgane neben dem menschlichen Haar (Haarscheiben) und ihre vergleichenanatomische Bedeutung, Arch. f. mikr. Anat. **65**:121-179, 1905.

Ueber Eine noch nicht Beschriebene Art menschlicher Kopfhaare, Bajonetthaare, Dermat. Ztschr. **17**:253-258, 1910.

Poulton, Edward B.: The Structure of the Bill and Hairs of Ornithorhynchus paradoxus; with a Discussion of the Homologies and Origin of Mammalian Hair, Quart. J. Micr. Sc. **36**:143-200, 1894.

Poumayrac, Alphonse-Marie-Marcelin: Étude sur les Hypertrichoses, Thesis, Bordeau, 1893.

Pruner-Bey: De la chevelure comme caracteristique des races humaines d'après des recherches microscopiques, Mém. Soc. d'anthropol. de Paris **2**, 1863.

Pusey, William Allen: The Principles and Practice of Dermatology. Ed. 3, New York, D. Appleton & Company, 1917.

Reh, L.: Die Schuppen der Säugethiere, Jenaische Ztschr. f. Naturwissensch. **29**:157-220, 1895.

Riddle, Oscar: Our Knowledge of Melanin Color Formation and Its Bearing on the Mendelian Description of Heredity, Biol. Bull. **16**:316-351, 1909.

Robinson, Louis: On a Possible Obsolete Function of the Axillary and Pubic Hair Tufts in Man, J. Anat. & Physiol. **26**:254-257, 1892.

Rose, Carl: Ueber die Entwicklung der Zähne des Menschen, Arch. f. mikr. Anat. **38**:447-491, 1891.

Roth, E.: Ueber behaarte Menschen, Dermat. Centralbl. **8**:34-40, 1905.

Rutherford, Thomas A., and Hawk, P. B.: A Study of the Comparative Chemical Composition of the Hair of Different Races, J. Biol. Chem. **3**:459-489, 1907.

Sabouraud, R.: Sur les cheveux moniliformes (trichorrexis et monilethrix), Ann. de dermat. et syph. **3**:781-793, 1892.

Maladies du cuir chevelu, Paris, Masson et Cie, 1902.

Correlation entre l'evolution genitale et la pathologie du systeme pileux dans l'espece humaine, Arch. mens. d'obst. et de gynéc. **5**:1-14, 1914.

Sarasin, Paul: Ueber die zoologische Schätzung der sogenannten Haarmenschen und über larvale Formen bei Säugethieren und Reptilien, Zool. Jahrb. Supplementband **15**:289-328, 1912.

Schafer, Sir Edward A.: The Endocrine Organs, Longsmans, Green & Company, London, 1916.

Schein, M.: Hypertrichosis lumbalis ohne spina bifida, Arch. f. Dermat. u. Syph. **107**:335-352, 1911.

Scheur, O.: Ein Fall von Vorzeitiger Entwicklung bei Hermaphroditismus mit Wachstumsstörung und Hypertrichosis, Fortschr. a. d. Geb. d. Röntgenstrahlen **17**:153-162, 1911.

Schleidt, Joseph: Ueber Frühstadien der Entwicklung von Schuppe und Feder, Arch. f. mikr. Anat. **83**:118-129, 1913.

Schneider, Karl Camillo: Lehrbuch der Vergleichenden Histologie der Tiere, Jena, Gustav Fischer, 1902.

Schultz, Walther: Schwärzfarbung weisser Haare durch Rasur und die Entwicklungsmechanik der Farben von Haaren und Federn, Arch. f. Entwcklngsmech. d. Organ. **41**:535-537, 1915.

Schöne, Georg: Beobachtungen über das Wachstum der Haare, Die Naturwissenschaften, 1914, pp. 388-393.

Schwalbe, G.: Ueber den Farbenwechsel winterweisser Tiere, Morphol. Arb. **2**:483-606, 1893.

Smith, Walter G.: A Rare Nodose Condition of the Hair, Brit. M. J. **2**:291-292, 1879.

Spuler, A.: Ueber die Regeneration der Haare, Verhandl. d. anat. Gesellsch. **13**:17-22, 1899.

Stockard, Charles R.: Developmental Rate and Structural Expression: An Experimental Study of Twins, "Double Monsters" and Single Deformities, and the Interaction Among Embryonic Organs During Their Origin and Development, Am. J. Anat. **28**:115-277, 1921.

Stöhr, P.: Entwicklungsgeschichte des menschlichen Wollhaares, Anat. Hefte **23**:1-66, 1903.

Strong, R. M.: The Cause of Whiteness of Hair and Feathers, Science **54**: 356, 1921.

Stuart, T. P. Anderson: The Curled Hair and Curved Hair Follicle of the Negro, J. Anat. & Physiol. **16**:362-363, 1882.

Sumner, Francis B.: Some Studies on Environmental Influence, Heredity, Coloration and Growth in the White Mouse, J. Exper. Zool. **18**:325-432, 1915.

Szymonowicz, Ladislaus: Ueber die Nervenendigungen in den Haaren des Menschen, Arch. f. mikr. Anat. **74**:622-635, 1909.

Toldt, Karl, Jr.: Ueber eine beachtenswerte Haarsorte und über das Haarformensystem der Säugetiere, Ann. d. K. K. Naturhistorischen Hofmuseums in Wien **24**:195-265, 1910-1911.

Topinard, P.: Eléments d'anthropologie générale, Paris, 1885.

Trotter, Mildred: A Study of Facial Hair in the White and Negro Races, Washington University Studies, Scientific Series, **9**:273-289, 1922.

The Resistance of Hair to Certain Supposed Growth Stimulants, Arch. Dermat. & Syph. **7**:93-98, 1923.

Trotter, Mildred, and Danforth, C. H.: The Incidence and Heredity of Facial Hypertrichosis in White Women, Am. J. Phys. Anthrop. **5**:391-397, 1922.

Unna, P.: Beiträge zur Histologie und Entwicklungsgeschichte der menschlichen Oberhaut und ihrer Anhangsgebilde, Arch. f. mikr. Anat. **12**:665-741, 1876.

Virchow, R.: Die russischen Haarmenschen, Berl. klin. Wchnschr. **10**:337-339, 1873.

Wada, Yochio: Ueber die Hypstetrichosis sacro-lumbalis mit spina bifida occulta, Rostock, 1908.

Waelsch, Ludwig: Ueber Hypotrichosis (Alopecia congenita), Arch. f. Dermat. u. Syph. **103**:63-93, 1910.

Waldeyer, W.: Atlas der menschlichen und tierischen Haare, Lohr, 1884.

Walsh, David: The Hair and Its Diseases; Including Ringworm Greyness and Baldness, London, Boilliere, Tindall and Cox, 1908.

Weber, Max: Bemerkungen über den Ursprung der Haare und über Schuppen bei Säugetieren, Anat. Anz. **8**:413-423, 1893.

Wimpfheimer, Carl: Zur Entwicklung der Schwissdrüsen der behaarten Haut, Anat. Hefte **34**:430-504, 1907.

Abstracts from Current Literature

THE MOTHER'S MILK AS A SOURCE OF INFECTION IN EPIDEMIC PEMPHIGUS NEONATORUM (IMPETIGO CONTAGIOSO BULLOSA). R. R. MELLON, D. CALDWELL and W. W. WINANS, Am. J. M. Sc. **169**:419 (March) 1925.

Four of six outbreaks of pemphigus neonatorum occurring during a three year period were found to be due to the presence of *Staphylococcus aureus* in the mothers' milk: one was due to an infected burn; the origin of one was undiscovered. In a sporadic case, the mother had had an erythematous eruption resembling a drug rash. Cultures were later taken from the milk, using both the first and the last pumping, and it was found to contain pure cultures of *Staphylococcus aureus* and *albus* with attendant hemolysis. The lesions on the baby cleared as soon as the child was taken from the mother's milk. Similar findings were reported in later outbreaks; in one instance two babies of different mothers taking the same milk developed the lesions simultaneously. The mothers who have the staphylococcus in the milk are regarded as carriers.

PRIMARY INOCULATION TUBERCULOSIS OF THE SKIN WITH METASTASIS TO REGIONAL LYMPH NODES. J. H. STOKES, Am. J. M. Sc. **169**:722 (May) 1925.

With a review of the literature, Stokes gives a report of ten cases of primary skin tuberculosis inoculation, and emphasizes the importance of diagnosis in these cases, with recognition of a focus of infection when regional lymph nodes are invaded. The primary lesion might be confused with syphilis, sporotrichosis, actinomycosis and epithelioma.

Thorough excision of the primary focus is recommended as the most effective treatment, with radium treatment for the lymphatic metastases; ultraviolet rays locally and with general irradiation are of value, and small doses of neo-arsphenamin are useful in the treatment of tuberculids.

FURTHER OBSERVATIONS ON THE EPIDEMIOLOGY OF PEMPHIGUS NEONATORUM. R. R. MELLON and D. W. CALDWELL, Am. J. M. Sc. **169**:736 (May) 1925.

Human milk, often normally containing staphylococci, may be the source of some of the cases if these organisms are virulent for the child.

Staphylococci from any source are potential causes of the epidemics observed, but are not necessarily found in the mother's milk, although the mothers found to be carriers had been segregated.

EFFECT OF VARIOUS AGENTS—ULTRAVIOLET LIGHT, VACCINES, TURPENTINE, NEO-ARSPHENAMIN AND AUTO-BLOOD INJECTIONS—ON THE ENZYMES OF BLOOD AND SKIN. (A Preliminary Report.) J. F. SCHAMBERG and H. BROWN, Arch. Int. Med. **35**:537 (May) 1925.

Turpentine in olive oil (intramuscular), staphylococcic vaccines and auto-blood injections all tend to increase the lipolytic and proteolytic activity of the blood serum. Neo-arsphenamin in large doses depresses these serum activities while ultraviolet light decreases the lipolytic activity and increases the proteolytic activity of the blood serum. The ultraviolet light also decreases the lipase and protease in an animal's skin. Distilled water in small doses decreases the lipolytic and possibly the proteolytic qualities of the blood.

JAMIESON, Detroit.

EXPERIMENTAL OBSERVATION ON THE ADRENALS AND THE CHROMAFFIN SYSTEM. G. B. WISLOCKI and S. J. CROW, Bull. Johns Hopkins Hosp. **35**:187 (June) 1924.

1. Suprarenal insufficiency was produced in dogs by the combined surgical removal of part of the suprarenal glands and implantation of radium into the remainder.

2. The radium produced an area of necrosis which gradually destroyed the suprarenal tissue.

3. The medulla of the suprarenals and the abdominal chromaffin body were destroyed in the dog without producing symptoms.

4. A fragment of cortex amounting to about one fifth of the total cortex was found necessary for maintenance of life. After removal of the entire cortex, the animals died, with a terminal fall in blood pressure and temperature.

5. If the cortex as well as the chromaffin system produced epinephrin, this fact would not explain the death of animals after extirpation of the cortex.

PHYSIOLOGICAL, CHEMICAL AND CLINICAL STUDIES ON PITUITARY PRINCIPLES. JOHN J. ABEL, Bull. Johns Hopkins Hosp. **35**:305 (Oct.) 1924.

The hypophysis cerebri consists of the anterior and posterior lobes. Robertson has given the name tethelin to the growth principles of the anterior lobe, and he has separated from this lobe a mixture of substances which he believes contains this principle. This mixture produces striking effects on the metabolism and growth of experimental animals.

The much smaller posterior lobe (including the pars intermedia and the neural portion of the hypophyseal stalk) contains only one specific principle or hormone. This was isolated by Abel as a tartrate. It has an action on the uterus, causes prolonged rise in arterial blood pressure, has an antidiuretic action in diabetes insipidus and affects respiration in the dog and rabbits in a characteristic way.

McCAFFERTY, New York.

THE HEREDITARY TENDENCY TO HERPES FACIALIS AND URTICARIA. J. B. MCNAIR, J. A. M. A. **85**:35 (July 4) 1925.

In a short note the author presents a record of the occurrence of herpes simplex and urticaria in four generations of one family.

LESIONS OF THE EXTREMITIES ASSOCIATED WITH DIABETES MELLITUS. F. A. COLLER and P. L. MARSH, J. A. M. A. **85**:168 (July 18) 1925.

The report comprises a series of fifty-two cases of diabetes mellitus associated with ulcer, infections, or gangrene of the extremities. Each patient had a mild diabetes of long standing. The eight cases of ulcer were of the varicose vein type and the patients had been treated on the assumption that there was only a circulatory disturbance. On control of the diabetes, all ulcers healed with the same local treatment that was previously unavailing. There were twenty-four cases of infection either of the soft parts or of osteomyelitic type, with or without gangrene. The prognosis of osteomyelitis and secondary gangrene is poor, six of the ten patients so afflicted died. Early operation with amputation at the thigh is indicated.

There were twenty cases of primary gangrene associated with diabetes. Fifteen of the patients were uninfected, and of this number four died, while of five patients who had gangrene with infection, four died.

Infection is a grave menace in these cases. It reduces the carbohydrate tolerance. As to surgical treatment, there must be careful judgment, but not procrastination. Insulin was of great benefit in those patients whose tolerance was lowered by infection.

MICHAEL, Houston, Texas.

STUDIES IN EXPERIMENTAL SYPHILIS. I. THE INFLUENCE OF THE SIZE OF INOCULUM ON THE COURSE OF EXPERIMENTAL SYPHILIS IN THE RABBIT. A. M. CHESNEY and J. E. KEMP, J. Exper. Med. **41**:479 (April) 1925.

In their work with rabbits, the authors found that the size of the inoculation dose affected the incubation period—the larger the dose the shorter the incubation period. The course of the disease as a whole was not affected; individual cases, however, occasionally ran a malignant course.

STUDIES IN EXPERIMENTAL SYPHILIS. II. THE INFLUENCE OF A NON-SPECIFIC INFLAMMATORY REACTION UPON THE DEVELOPMENT OF THE CHANCRE. A. M. CHESNEY and J. E. KEMP, J. Exper. Med. **41**:487 (April) 1925.

Surface wounds, particularly old surface wounds, were found to be especially favorable to the development of *Spirochaeta pallida*, as the chancre develops relatively soon and reaches a greater size in old than in recent wounds. Coal tar dermatitis acts in a similar manner.

The hypothesis which they advance to account for this phenomenon is that active proliferation on the part of fixed connective tissue cells and epithelial cells is directly associated with multiplication of *Spirochaeta pallida*, this hypothesis explaining why the organisms are so numerous in fetuses and also why lesions are more likely to develop at the site of traumatism.

STUDIES IN EXPERIMENTAL SYPHILIS. III. FURTHER OBSERVATIONS OF THE POSSIBILITY OF CURE OF SYPHILIS IN THE RABBIT WITH ARSPHENAMIN. A. M. CHESNEY and J. E. KEMP, J. Exper. Med. **42**:17 (July) 1925.

Rabbits treated with arsphenamin early in the course of a syphilitic infection are rendered incapable of transmitting the disease by lymph node transplantation, and are almost uniformly susceptible to a second infection. If, however, treatment is started late in the course of the disease, the animals are almost uniformly refractory to a second inoculation, although lymph node transplantation would be negative. This refractory state is considered as possibly being due to an acquired immunity rather than to a persistence of the first infection. Under certain conditions it was possible to produce a generalized infection by reinoculation without any lesion at the inoculation site.

STUDIES IN EXPERIMENTAL SYPHILIS. IV. THE SURVIVAL OF TREPONEMA PALLIDUM IN THE INTERNAL ORGANS OF TREATED AND UNTREATED RABBITS. A. M. CHESNEY and J. E. KEMP, J. Exper. Med. **42**:33 (July) 1925.

Transfer of circulating blood, heart muscle, liver, brain, spleen and bone marrow, inoculated testicle and popliteal lymph nodes from untreated syphilitic animals showed that the lymph nodes uniformly carried the organism and produced a positive infection, the liver, spleen and bone marrow and testicle showing less uniform results. Animals treated with arsphenamin later in the

course of the disease and with which similar experiments were made, showed uniformly negative results. One animal with syphilitic keratitis was noninfectious according to the foregoing tests. The authors suggest that failure of reinoculation might indicate an acquired resistance which persists although no trace of the first infection can be found.

DISTINCTIVE CHARACTERISTICS OF INFECTIONS PRODUCED BY TREPONEMA PERTENUE IN THE RABBIT. L. PEARCE and W. H. BROWN, J. Exper. Med. **41**:673 (May) 1925.

A marked periorchitis was found to be a characteristic feature of intratesticular inoculation of rabbits with spirochetes of yaws. The lesion was of a granular or finely nodular type, with or without a diffuse involvement of the tunic, and could be recognized clinically about three weeks after inoculation, the following month showing tiny indurated nodules on the testicular covering. No lesions were discoverable in most animals three months after inoculation. These lesions were practically a constant feature and were unlike any lesion of the tunic observed after inoculation with *Spirochaeta pallida*. The organisms were disseminated to the noninoculated testicle, but no generalized lesions were observed.

THE OCCURRENCE OF STIGMATA OF CONGENITAL SYPHILIS IN RABBITS WITH SPECIAL REFERENCE TO THE FACTOR OF INHERITANCE. W. H. BROWN and L. PEARCE, J. Exper. Med. **41**:795 (June) 1925.

Rabbits born of infected parents were apparently normal at birth, but soon developed symptoms strongly suggestive of syphilis, although no infection could be demonstrated. The lesions consisted of a unilateral lesion of the cornea and iris and an abnormal growth of hair associated with an extensive alopecia affecting three of the litter of six. Three of these rabbits were susceptible to inoculation for syphilis, the other two showing negative results on examination of the popliteal lymph nodes. They are unable to say whether the stigmas presented were due to syphilis in the parents or possibly were due to some unusual circumstances of unknown origin and were of functional origin due to heredity.

EXPERIMENTAL PRODUCTION AND TRANSMISSION OF TAR SARCOMA IN CHICKENS, J. B. MURPHY and K. LANDSTEINER, J. Exper. Med. **41**:807 (June) 1925.

Injection of coal tar resulted in the production of spindle cell sarcoma in two instances, although attempts to transmit the neoplasm by filtrate or desiccate of the tumor were entirely unsuccessful.

CAN NORMAL PERSONS BE CARRIERS OF THE DUCREY BACILLUS? C. C. SAELHOF, J. Urol. **13**:485 (April) 1925.

Of twenty-six selected men, 8.5 per cent. were found to harbor an organism which had the morphology and the cultural characteristics of the Ducrey bacillus and was a gram-negative streptobacillus. Similarly, of thirty-eight women, 12.6 per cent. were found to be carriers, although none of those examined had gross genital lesions or abrasions of the mucous membrane. It is thought possible that these organisms might have been in a latent state, although more virulent to others than to the carriers.

THE INFECTION OF THE FEMALE GENITALIA BY THE ORGANISM OF VINCENT, WITH REPORT OF A CASE. E. MCCORMAC, J. Urol. **13**:565 (May) 1925.

This is the report of a case presenting ulcers of the labia minora and the rectolabial raphé in which fusiform bacilli and the spirochete of Vincent's angina were found in large numbers. The infection probably occurred by means of a sputum contamination and healed rapidly under treatment with neo-arsphenamin locally in paste and douche.

JAMIESON, Detroit.

THE GLOBULIN OF THE CEREBROSPINAL FLUID AND ITS RELATIONSHIP WITH THE OTHER INVESTIGATIVE REACTIONS. RUBINSTEIN and STEPHANOVITCH, Bull. Soc. franç. de dermat. et syph. **31**:443, 1924.

In early syphilis, the positivity of the globulin reaction is the most nearly constant sign in the spinal fluid; in late syphilis, except in tabes and paresis, it is often negative. It may be positive when the Wassermann reaction of the fluid is negative, and at times negative with the Wassermann test positive. The reaction of Nonne-Apelt is considered to be the most specific and sensitive of the globulin tests.

TABES WITH SECONDARY SYPHILIDS OF THE SKIN AND MUCOSA. CLEMENT SIMON, Bull. Soc. franç. de dermat. et syph. **31**:449, 1924.

A case is reported and a bibliography of previous case reports is appended.

GENERALIZED PSORIASIS NOT AFFECTING AN OLD SCAR. C. AUDRY and C. LAURENTIER, Bull. Soc. franç. de dermat. et syph. **31**:453, 1924.

In a palm-sized scar following a burn, on the outer surface of the forearm, no psoriatic lesion could be found, although there were many patches just outside the margin of the scar.

ATROPHIC LICHEN PLANUS OR THE POROKERATOSIS OF MIBELLI. A. OECONOMOU, Bull. Soc. franç. de dermat. et syph. **31**:454, 1924.

In a boy, aged 15 years, there was a constant scattered eruption of small papules, which had continued for four or five years, atrophic scars remaining at the sites of former lesions. Clinically and histologically, the case showed findings of both lichen planus atrophicus and porokeratosis.

TUBERCULOSIS. MILIAN and MARCERON, Bull. Soc. franç. de dermat. et syph. **31**:461, 1924.

In a woman of 27 years, the lesions were widely scattered and of five months' duration. They were as large as a small egg, and tender on palpation.

PURPURIC SYPHILIDS WITH ATROPHY. MILIAN and PERIN, Bull. Soc. franç. de dermat. et syph. **31**:464, 1924.

A case is reported clinically and histologically in which faint erythematous syphilitic macules preceded the atrophy. The eruption was generalized and of five months' duration.

SUPPURATING INGUINAL ADENOPATHY; TERTIARY SYPHILIS. MILIAN, Bull. Soc. franç. de dermat. et syph. **31**:466, 1924.

The suppurating lesion, in a man who had had syphilis for four years, disappeared within four weeks under treatment with neo-arsphenamin.

XANTHO-ERYTHRODERMA (PROBABLE PREMYOCOTIC ERYTHRODERMA) IN PLAQUES, WITH HYPERKERATOSIS. MILIAN and PERIN, Bull. Soc. franç. de dermat. et syph. **31**:466, 1924.

In a youth, aged 18 years, the patches were disseminated, and had been appearing for three and a half years. There was some resemblance to parapsoriasis en plaques, but the presence of infiltration in some of the patches, and of lymphadenopathy, as well as the biopsy findings and a leukocytosis and eosinophilia in the blood, indicated that this was probably a case of early mycosis fungoides. A striking peculiarity of the case was the hyperkeratosis.

TWO CASES OF CONJUNCTIVAL PEMPHIGUS. LOUSTE, DUPUY-DUTEMPS, THIBAUT and LOUET, Bull. Soc. franç. de dermat. et syph. **31**:481, 1924.

In the first case, the conjunctival involvement was comparatively mild, accompanying a typical eruption of dermatitis herpetiformis; in the second case, the conjunctivae and corneas had been involved for four years, and there were lesions in the throat, but none on the skin.

A CASE FOR DIAGNOSIS. LOUSTE, LEVY-FRANKEL and THIBAUT, Bull. Soc. franç. de dermat. et syph. **31**:486, 1924.

There were slowly progressive pigmented keratoses and atrophic areas extending in a rough line from the tip of the left index finger along the radial side of the hand and wrist, on the dorsal aspect. The patient, a girl, aged 17, had first noticed the condition eight years previously. The involved index finger had been severely burned in infancy; there was also tenderness over the third cervical vertebra.

UNRECOGNIZED SYPHILIS OF THE FACE, OF LUPOID APPEARANCE. GASTOU and FUCHS, Bull. Soc. franç. de dermat. et syph. **31**:490, 1924.

A woman with a marital history highly suggestvie of syphilis, and a positive Wassermann reaction, presented a serpiginous group of nodules about the nose, with ulceration, crusting and scarring, of eighteen months' duration. In 1920, there had been a similar group of lesions on the thigh, and subsequently on the abdomen.

ARSENICAL PIGMENTATION IN A TABETIC PATIENT. LORTAT-JACOB and A. HAYE, Bull. Soc. franç. de dermat. et syph. **31**:492, 1924.

A patient with tabes of three years' duration, who had received neoarsphenamin medication for one and one-half years, presented an increasing pigmentation of the skin of the eyelids, lower part of the abdomen and thighs, with thickening of the skin in the latter area, the distribution apparently following a territory of sympathetic and spinal nerve supply.

PITYRIASIS RUBRA PILARIS. LORTAT-JACOB and BREGER, Bull. Soc. franç. de dermat. et syph. **31**:494, 1924.

Following an alleged attack of scarlatina, the eruption of pityriasis rubra pilaris had first appeared in September, 1922, and had gradually extended. The basal metabolic rate was 20 per cent. higher than normal. Improvement following subcutaneous injections of the antigen of Negre and Boquet suggested that the condition might be classifiable as a tuberculid.

LYMPHADENOMA OF PENIS. MILIAN, PERIN and SOLENTE, Bull. Soc. franç. de dermat. et syph. **31**:496, 1924.

A large, vegetating penile lesion, of epitheliomatous appearance, was accompanied by bilateral inguinal lymph node enlargement. The diagnosis of lymphadenoma was made histologically, and intensive roentgen-ray treatment brought rapid involution.

PRIMARY EPITHELIOMA OF MAMMARY GLAND, WITH LYMPH NODE INVOLVEMENT. CHATELLIER and NANTA, Bull. Soc. franç. de dermat. et syph. **31**:500, 1924.

Sections of the tumor were presented, the interesting feature being the large size of the cancer cells, which were dissociated and surrounded by neutrophilic polymorphonuclear leukocytes.

LESION OF INNER TABLE OF SKULL, PROBABLY DUE TO CONGENITAL SYPHILIS IN A PATIENT WITH HEREDITARY ACHONDROPLASIA. ANDRE LÉRI and LINOSSIER, Bull. Soc. franç. de dermat. et syph. **31**:501, 1924.

In a mother and daughter with achondroplasia, the Wassermann reaction was negative, and there were no visible signs of syphilis. Roentgenologic studies revealed cranial lesions in the daughter.

SYPHILIS OF INNER TABLE OF THE SKULL. ANDRE LÉRI and COTTENOT, Bull. Soc. franç. de dermat. et syph. **31**:502, 1924.

By roentgenographic study, cranial lesions were demonstrated in patients with epilepsy, hemiplegia, monoplegia and headache. Bismuth therapy had been used in three such cases in which epilepsy had been present, and the seizures had stopped.

HYPERTROPHIC TUBERCULOSIS OF THE CHEEK SIMULATING ORIENTAL BOIL. A. LOUSTE, L. LOUET and J. DARQUIER, Bull. Soc. franç. de dermat. et syph. **31**:504, 1924.

The lesion, of seven months' duration, occurred in an Armenian; bacilli were found in the sections.

ORAL ADMINISTRATION OF DERIVATIVES OF PHENYLARSENIC ACID, AND THE INDICATIONS. LEREDDE, Bull. Soc. franç. de dermat. et syph. **31**:506, 1924.

This medication may be used, according to Leredde, in patients presenting nitritoid crises and arsenical dermatoses, but not in those with hemorrhagic reactions.

PREVENTION AND TREATMENT OF SYPHILIS BY THE ORAL ROUTE. C. LEVADITI, Bull. Soc. franç. de dermat. et syph. **31**:513, 1924.

In 1922, the author showed that the acetyl derivative of oxyaminophenylarsenic acid, given by mouth, prevented syphilis and provoked rapid healing of syphilitic lesions in animals and in man. He feels that other derivatives of the acid are probably just as effective. The acetyl derivative was first prepared by Ehrlich, Benda and Bertheim.

A CASE OF PROBABLE SYPHILITIC ICTERUS ACCOMPANYING A CHANCRE IN THE "PREHUMORAL" PERIOD. GASTOU and TISSOT, Bull. Soc. franç. de dermat. et syph. **31**:519, 1924.

The signs of catarrhal jaundice were lacking, and the manifestation disappeared rapidly under mercurial medication.

URTICARIA LIMITED TO THE PENIS, FOLLOWING NEO-ARSPHENAMIN MEDICATION. P. NOEL, Bull. Soc. franç. de dermat. et syph. **31**:520, 1924 .

Lasting from fifteen to thirty minutes, this manifestation first appeared after the second injection, and followed each subsequent injection of the drug.

RECKLINGHAUSEN'S DISEASE AND VARIOLA. P. NOEL, Bull. Soc. franç. de dermat. et syph. **31**:521, 1924.

A Hindu, aged 25, had first noticed the appearance of cutaneous tumors at the age of 7, following an attack of variola. In the opinion of the author, the variola may have been the precipitating factor.

ARSENICAL STOMATITIS. ERNOTTE, Bull. Soc. franç. de dermat. et syph. **31**:522, 1924.

In a man with syphilis of three years' duration, who had received two courses of neo-arsphenamin without any accident, a burning sensation and congestion appeared in the mouth. This became more pronounced with succeeding injections, vesiculation and suppuration ensuing. The use of the arsenical drug was stopped, and the stomatitis subsided with the use of diluted Lugol's solution locally. Under treatment with bismuth, there were no signs of intolerance.

THE NEGLIGIBLE TOXICITY OF NEO-ARSPHENAMIN GIVEN INTRAVENOUSLY AT INTERVALS OF SEVERAL DAYS IN THE NEGROES OF THE AMERICAN EXPEDITIONARY FORCES. LE COTY, Bull. Soc. franç. de dermat. et syph. **31**:547, 1924.

In a series of 193 patients, representing various stages of syphilis and a few nonsyphilitic conditions, 1,096 injections were given, the dosage varying from 0.15 to 1.2 gm., and the interval between treatments being 3 or 4 days. The drug was given in concentrated solution, the volume not exceeding 5 c.c.; the patients were allowed to go out immediately after the injection had been given, and regular meals were eaten before and after the treatment. In one case there was a slight nitritoid reaction, and in eight there was a slight elevation of the temperature.

PARKHURST, Toledo, 6.

THE PROLONGED AND CURABLE ALBUMINURIA OF SYPHILIS. C. LAURENT, Presse méd. **33**:716 (May) 1925.

The author describes: (1) albuminuria occurring in the secondary period which disappears quickly under antisyphilitic treatment; (2) true nephritis occurring in the secondary period which is unaffected by antisyphilitic treatment. However, it eventually clears up; (3) true interstitial nephritis disease, which is usually of long standing; (4) albuminuria of infancy frequently due to hereditary syphilis.

The author cites four cases of prolonged albuminuria subsequent to syphilis of from three to five years' duration. The amount of albumin ranged from 2 to 12 gm. per liter. In each case the albuminuria cleared up, but several courses of treatment are necessary to affect a cure. These cases should not be spoken of as syphilitic nephritis, as there are no clinical symptoms of nephritis, but simply prolonged and curable albuminuria of syphilitic origin.

THE TREATMENT OF GENERAL PARESIS BY INOCULATION WITH MALARIA. PAGNIEZ, Presse méd. **33**:717 (May) 1925.

In 1917, Wagner inoculated with tertian malaria patients who had general paresis. This idea was suggested to him by the apparent favorable reactions in general paresis produced by certain febrile conditions. From 25 to 35 per cent. of those with general paresis showed improvement, according to the statistics of nearly all authors. No other treatment gives such good results. The results are best in recent cases. Occasionally the clinical signs are changed without the serology, and vice versa. Occasionally patients die during the treatment, and the malaria infection is probably responsible. The treatment should always be given in hospital, and mosquitoes should be prevented from gaining access. Some authors believe the malaria parasite lodges in the blood vessels and permits the protective substances to pass into the brain tissue. Other authors believe that there is either a direct or an indirect antagonism between the malaria parasite and the spirochete. It is interesting to note that general paresis is unknown in tropical countries in which malaria abounds. Statistics show that of 4,134 officers having syphilis, 195 later developed paresis. None of these had any acute infectious diseases in the early period of the syphilis. On the contrary, 241 syphilitic patients who had an acute infection did not develop syphilis of the brain. Another author pointed out that he had ten syphilitic patients who had malaria during their secondary period and all developed paresis. It is history that in certain countries in which malaria is endemic one or two acute attacks will cure tertiary ulcerations.

THE TREATMENT OF SCLERODERMA BY THE ULTRAVIOLET RAY. PROF. IANICHEWSKI, Presse méd. **33**:863 (June) 1925.

The author reports favorable results in the treatment of diffuse disseminated scleroderma by means of the ultraviolet ray. He reports two cases which have been favorably influenced by this form of treatment. Several of the areas of scleroderma have almost disappeared.

McCAFFERTY, New York.

SKIN MANIFESTATIONS IN DISEASES OF THE MYELOGENOUS SYSTEM (MYELOGENOUS LEUKEMIA, CHLOROMA, MYELOMA). EMIL ZURHELLE, Dermat. Ztschr. **37**:1, 1922.

This is a review of the entire literature of skin tumors in lymphatic and myelogenous leukemia, myeloma, chloroma and leukosarcomatosis. The author reports a case of subacute subleukemic chloroleukemia in a man, aged 20.

EXPERIENCE WITH ICTERUS IN SYPHILITICS. C. GUTMANN, Dermat. Ztschr. **37**: 39, 1922.

During the five year period, 1916-1921, eighty-nine of 1,187 syphilitic persons or 7.9 per cent., evidenced icterus. Eight patients showed the icterus prior to the introduction of antisyphilitic therapy. Early icterus followed the arsphenamin treatment in six patients and late icterus in seventy-five patients. Mercurial treatment without arsphenamin was given to two patients. Men and women suffered equally; no children were observed. Nutrition is felt to have a part in the occurrence of icterus. Full doses of arsphenamin were given to thirty-eight of those who had suffered with icterus, without ill effect after return to normal.

DIAGNOSIS OF SYPHILIS BY THE TURBIDITY REACTION OF DOLD AND MEINICKE. R. STREMPEL, Dermat. Ztschr. **37**:62, 1922.

The author has completed parallel tests on 2,090 serums with the Dold turbidity reaction and others. He feels that it has earned a place in the diagnosis of syphilis, differing from the Wassermann reaction in no wise than other flocculation reactions, and as the Sachs-Georgi, and agreeing with the Wassermann reaction in about 97 per cent. Meinicke has devised a turbidity reaction utilizing cholesterinized horse heart extract and balsamum tolutanum. This reaction corresponded with the others in 90 per cent. of the tests.

ETIOLOGY OF BOECK'S SARCOID. A. RUETE, Dermat. Ztschr. **37**:129, 1922.

A section of skin taken from the shoulder of a patient revealed an undoubted Boeck's sarcoid. A lesion of ten days' duration disclosed an acid-fast bacillus held to be the tubercle bacillus. The general examination of the patient, roentgen ray, tuberculin tests, etc., did not disclose any evidence of tuberculosis. The patient showed evidence of icterus, edema of the liver, spleen and kidneys, and died. Necropsy was not obtained. The possibility of intestinal tuberculosis was not investigated by roentgen-ray examination of the abdomen or examination of the stools for tubercle bacilli.

SYPHILIS AND ARSPHENAMIN IN THEIR ETIOLOGIC RELATIONSHIP TO BILIRUBINEMIA AND ICTERUS. F. W. KLOEPPEL, Dermat. Ztschr. **37**:137, 1922.

The Bergh test for bilirubin in the blood is taken as an indication of the syphilitic disturbance of the liver function. High bilirubin content may be encountered in secondary syphilis prior to the injection of arsphenamin. These patients should be treated with care. The use of high doses of arsphenamin, or daily injections of arsphenamin or even arsphenamin and mercury combined give only an evanescent rise in the bilirubin content of the blood. It is held that there is no relation between the amount of arsphenamin injected and the degree of icterus, nor does there appear to be a relation between the time of injection and the appearance of the icterus in so-called late icterus. Icterus also appears after mercury treatment, even if no arsphenamin has been used. Icterus also recedes after arsphenamin treatment of the syphilitic patient. Hence, one cannot maintain an hepatotoxic action for the arsphenamins.

CONCERNING PSEUDOXANTHOMA ELASTICUM. M. WOLF-KAUFMANN and A. HEINRICHSDORFF, Dermat. Ztschr. **37**:193, 1922.

A patient, aged 76, had lesions on the neck and arms simulating pseudoxanthoma elasticum, and lesions on the buttocks like those of calcification of the skin. The histologic studies did not disclose the elastic tissue changes of elastorrhexis. It is thought that this case throws a new light on the possible relationship between calcification and pseudoxanthoma elasticum. It was held to belong to the group of elastomas rather than to pseudoxanthoma elasticum.

MULTIPLE PRIMARY SKIN CARCINOSIS. JULIUS K. MAYR, Dermat. Ztschr. **37**:207, 1922.

A patient, aged 53, developed numerous basal cell carcinomas after a siege of pyemia. The lesions appeared about sites of pressure, as from suspenders and belt. The lesions were resistant to roentgen-ray treatment. The general

health of the patient was not affected. The group of primary multiple carcinosis has rarely been reported. Mayr would include his example with the late nevi.

NOTE ON PAPER OF FISCHL AND KIRSCHNER CONCERNING ULCUS MOLLE. A. BUSCHKE, Dermat. Ztschr. **37**:221, 1922.

Buschke corrects mention of the finding of diphtheria organisms in ulcus molle. Blaschko was incorrectly accredited with this observation. Buschke did find fusospirilla sympiosis and in three cases the bacillus of Matzenauer.

GRANULOMA PEDICULATUM (GRANULOMA PYOGENICUM OF AMERICANS H.G.). F. FALKENSTEIN, Dermat. Ztschr. **37**:299, 1923.

Examination of an excised lesion showed innumerable gram-positive cocci and newly formed capillaries. The lesions seemed to consist of blood vessel endothelium. The maceration is held to be secondary. A second case showed the origin of the granulation tissue from the swollen endothelium.

SPONTANEOUS RECURRENCE OF ARSPHENAMIN EXANTHEM. FELIX HARRY, Dermat. Ztschr. **37**:305, 1923.

Report of a case in which an arsphenamin eruption followed the third injection of the fourth course of antisyphilitic treatment in which arsphenamin alone was being utilized. The eruption receded after seventy-four days, to recur without further application of any antisyphilitic treatment after twenty-three days. The spontaneous arsphenamin exanthem cleared in fifteen days. The theories of recurring eruptions of this character are reviewed. The author believes that the vegetative nervous system may be irritated by intestinal, psychic or chemical means and bring forth the clinical manifestations.

TECHNIC FOR CARBON DIOXID SNOW TREATMENTS. HUGO HECHT, Dermat. Ztschr. **37**:313, 1923.

Hecht advises the making of a mold to be filled with the solidified snow in order to have exact approximation of the therapeutic agent to the part to be treated.

TREATMENT OF ULCER OF THE LEG. HUGO HECHT, Dermat. Ztschr. **37**:315, 1923.

The calloused circumference is removed surgically. Iodoform is first applied, later a thin coating of dermatol. Epithelial stimulants are then applied. The very large ulcers have a band about 1 cm. broad removed from the circumference with the scalpel, the granulations scraped, and adhesive plaster strips laid across.

GOODMAN, New York.

SYPHILITIC HYDROCELE OF THE NEWBORN. B. SPARACIO, Riforma Med. **41**:462 (May 18) 1925.

Among the rare symptoms of hereditary syphilis, the inflammation of the vaginal membrane is most important. The hydrocele of syphilis is usually unilateral, persistent and irreducible. The author reports a case in a boy, 1 month old, who also had Parrot's disease of the right shoulder. Antisyphilitic treatment cured both conditions.

SYPHILIS AND RHEUMATISM. A. ORO, Riforma Med. **41**:557 (June 15) 1925.

There is a chronic form or poli-articular rheumatism due to syphilis which is more common than usually thought. In these cases antisyphilitic treatment

improves the condition, although a "restitutio ad integrum" is impossible. Syphilitic poli-articular rheumatism has no proper symptoms, but those common to cases of this kind and the diagnosis is made in view of the history of the patient or the coincidence of other manifestations of the disease. The author reports one case in detail.

BIOCHEMICAL IMPORTANCE OF FRECKLES. B. COGLIEVINA, Riforma Med. **41**:581 (June 22) 1925.

Studying the termal sensibility of the skin in persons affected with freckles, the author noted that the pigmented points were more sensitive to heat. He believes that freckles represent the effort of nature to protect the superficial nerve endings of the skin against the short wave radiations, especially heat.

MOLLUSCUM CONTAGIOSUM. G. BERTI, Sperimentale **74**:477 (June) 1925.

The studies of the author prove that molluscum bodies have their origin in the degenerate protoplasm of the rete cells. The nuclei have no participation in the process.

PARDO-CASTELLO, Havana.

DERMATOLOGIC ABSTRACTS

THE JOURNAL OF THE AMERICAN MEDICAL ASSOCIATION

RELATIVE ABSORPTION AND THERAPEUTICS EFFICIENCY OF SOME BISMUTH PREPARATIONS. L. G. BEINHAUER and F. M. JACOB, Am. J. Syph. **9**:213 (April) 1925.

Beinhauer and Jacob hold that bismuth is an active antisyphilitic drug. Its effect on clinical manifestations is at least as rapid as that of mercury. Its effect on persistent Wassermann reactions is more marked than that of the usual drugs used. All preparations are painless. With quickly absorbable drugs, rapid toxic effects were noted and with slowly absorbable drugs cumulative action must be kept in mind. The therapeutic efficiency of all preparations studied varied but slightly even though the absorption rate varied greatly.

CLINICAL AND BIOCHEMICAL STUDY OF NEUROSYPHILIS. L. H. CORNWALL and C. N. MYERS, Am. J. Syph. **9**:256 (April) 1925.

The arsenic content of the liver, spleen and kidneys was determined by Cornwall and Meyers in a series of rabbits at intervals of from one to ninety-six hours following the intravenous administration of silver arsphenamin. Larger quantities of the drug were fixed by the spleen than by the liver or kidneys. After four days the amount of arsenic in the spleen was twelve times as great as that in the liver.

ACUTE PURPURA HEMORRHAGICA AS A COMPLICATION IN TREATMENT OF SYPHILIS. P. A. O'LEARY and H. M. CONNER, Am. J. Syph. **9**:262 (April) 1925.

Two cases of toxic purpura following sulpharsphenamin are reported by O'Leary and Conner. That neo-arsphenamin is the most frequent cause of

this complication is also emphasized. The opinions of various authors as to the cause of the hemorrhagic diseases following the intravenous injection of neo-arsphenamin are given. No deductions are made from the accumulated evidence. Purpura of the hemorrhagic type may be noted as a complication of the intramuscular or intravenous use of sulpharsphenamin.

ETIOLOGY AND MANAGEMENT OF ANTENATAL SYPHILIS. A. R. FRASER and R. L. IMPEY, Am. J. Syph. **9**:274 (April) 1925.

Fraser and Impey stress the fact that antenatal antisyphilitic treatment of the pregnant woman should result in the birth of a healthy infant, and that if kept under observation, and, if necessary, treated, the infant should develop into healthy adolescence. The problem of antenatal syphilis thus resolves itself into an unalterable dogma that every syphilitic expectant mother must be given the advantage of preventive treatment in view of the possible death or infection of her child in utero.

THROMBO-ANGIITIS OBLITERANS. F. L. MELENEY and G. G. MILLER, Ann. Surg. **81**:976 (May) 1925.

Meleney and Miller present the results of their anatomic, pathologic and clinical study of twenty-five cases of thrombo-angiitis obliterans occurring among Chinese. The process appears to be an inflammatory one, attacking the large and small arteries and veins in an irregular manner and causing thrombosis and obliteration. It is not necessarily progressive either from below upward or from above downward. The nutrient arteries of the nerves are frequently the site of this process. This may in some manner explain the severe pain which is constantly associated with this disease. An extensive collateral circulation develops as a result of the blocking of blood vessels. In some cases this collateral development can keep pace with the obliterating process and maintain the circulation. In other cases it cannot keep pace with it and then more or less extensive gangrene develops. In those cases in which there is general and local evidence that the collateral circulation can keep pace with or outrun the obliterating process, and the gangrenous area is small, the treatment should be conservative operation. In the other cases the treatment should be radical operation. Only in borderline cases can conservative general treatment be expected to be of much avail.

THEORY OF ORIGIN OF TUMORS. G. L. ROHDENBURG, J. Cancer Res. **9**:3 (March) 1925.

It is Rohdenburg's belief that neoplasia is a condition brought about by a disturbance of the salt metabolism of the cell, by reason of which the cell becomes hypermineralized as compared with the surrounding body juices.

COMPARATIVE CYTOLOGIC STUDY OF NEOPLASMS OF ANIMALS AND PLANTS. M. LEVINE, J. Cancer Res. **9**:11 (March) 1925.

Levine contends that the cells with lobulate nuclei seen in cancer have not been adequately studied and their significance has not been understood. These cells are found in actively growing parts of carcinomas, and their nuclear structure appears to be associated with some increased metabolic process involved in the growth of the malignant neoplasm. The giant cell with the multilobulate nucleus appears to play an important rôle in the growth and development of the malignant neoplasm.

CULTIVATION OF MALIGNANT TUMOR CELLS INDEFINITELY OUTSIDE BODY. A. FISCHER, J. Cancer Res. **9**:62 (March) 1925.

A method has been developed by Fischer by which it is possible to cultivate sarcoma cells of the type of Rous chicken sarcoma for a long time outside the body. By placing a piece of muscle tissue from an adult normal chicken side by side with the fragment of sarcomatous tissue in the culture, the muscle tissue is invaded by the destroying and infiltrating sarcoma cells, which grow and multiply within the muscle fragment. After a few passages the muscle tissue is practically destroyed and a new piece must be added. It is possible to get several pieces of normal muscles contaminated by sarcoma cells at one time, after which they can be separated and cultivated in individual cultures and again contaminate other muscle fragments.

RAPID PRODUCTION OF CANCER IN RABBITS BY COAL TAR. K. ITCHIKAWA and S. M. BAUM, J. Cancer Res. **9**:85 (March) 1925.

Results noted by Itchikawa and Baum show that contrary to the general belief the rabbit is the best animal for the experimental production of carcinoma by means of coal-tar. They have obtained the "first stage of cancer" in thirty-five days and "fully developed cancer" in forty-seven days.

EXPERIMENTAL PRODUCTION OF MALIGNANT GROWTHS BY CHEMICALS. J. K. NARAT, J. Cancer Res. **9**:135 (March) 1925.

Narat found that repeated applications of hydrochloric acid or caustic potash to the skin of mice over prolonged periods resulted in production of papillomatous and ulcerative lesions. The tumors seemed to be of inflammatory character and possibly presented precancerous alterations in epithelium. In some strains applications elicited formation of tumors which presented morphologically as well as biologically the characteristics of a cancer. Some strains of mice were refractory to experimental production of cancer, disregarding whether tar, caustic potash or hydrochloric acid was used.

METABOLISM OF CARCINOMA CELLS. O. WARBURG, J. Cancer Res. **9**:148 (March) 1925.

The hypothesis of tumor formation advanced by Warburg substitutes for the general and indefinite conception "irritation," the definite conception "oxygen-deficiency." According to it, tumors originate from the differentiated growing cells which are an integral part of every living tissue. In so far as oxygen deficiency results in the death of all cells which do not glycolyze, it does increase the glycolytic activity of the tissue, considered as a whole; but it does not increase the glycolytic activity of the individual cells which remain.

TREATMENT OF CHANCROID WITH TARTAR EMETIC SOLUTION INTRAVENOUSLY. HERMAN GOODMAN, Journal of Urology **13**:489, 1925.

Goodman suggests the use of solutions of tartar emetic or antimony potassium tartrate intravenously in the treatment of chancroid. The drug is given in a concentration of 1:100. A commercial sterilized 1 per cent. solution, standardized and biologically tested, contained in 10 c.c. hermetically sealed ampules has been used. The initial dose intravenously has been 5 c.c. of the 1:100 solution, given once every second day or at longer intervals to once in five days. The number of injections has varied from four to eight.

The dose may be increased by 1 c.c. at each injection, but no dose greater than 12 c.c. has been administered. There have been no ill effects.

The use of antimony potassium tartrate in chancroid is recited in case histories. It is hoped that the experiences of others will warrant further publication.

LYMPHOBLASTIC ERYTHRODERMIA. J. H. SEQUEIRA and P. N. PANTON, Quart. J. Med. **18**:250 (April) 1925.

The clinical features and blood picture presented by the five cases reported by Sequeira and Panton were characteristic. The most prominent physical sign in all cases was the generalized redness of the skin. Glandular enlargement was present in all, but never formed the marked feature usual in chronic lymphatic leukemia. The course of the disorder is very chronic, extending over a number of years and is unaffected by treatment. The skin condition is associated with a blood picture of peculiar type. Some degree of anemia is usually present and may be fairly severe. The anemia is of the secondary type, but the color index may, on occasion, be high. The characteristic changes are found in the white cells, and consist in an increase, relative and absolute of the lymphocytes, the type of lymphocyte involved being mainly the small lymphocyte. The total number of leukocytes varies from 8,000 to nearly 60,000, and of these numbers the small lymphocytes may form as much as 80 per cent. In the latest stages the blood picture approaches, but does not reach, that of leukemia.

EXTREME SENSITIZATION TO COW'S MILK PROTEIN. F. F. TISDALL and I. H. ERB, Canad. M. A. J. **15**:497 (May) 1925.

Two cases of extreme sensitization to cow's milk protein are reported by Tisdall and Erb. The diagnosis of this condition usually presents little difficulty on account of the striking and unusual symptoms which appear directly after the first administration of cow's milk. The symptoms usually are, refusal of the infant to take cow's milk after a few drops have been swallowed, followed by pain as evidenced by crying, swelling of the skin and mucous membranes wherever touched by the milk, and symptoms of shock as evidenced by rapid shallow breathing and cyanosis. Sometimes a general urticaria of the skin appears. The treatment consists in desensitizing the infant by giving minute doses of cow's milk which are gradually increased until the necessary amount for the nutrition of the child is administered. To accomplish this usually required three or four months' time.

EXPERIMENTS ON CANCER PRODUCING SUBSTANCES. E. L. KENNAWAY, Brit. M. J. **2**:1 (July 4) 1925.

Further experiments on the formation by heat of cancer producing materials are described by Kennaway. The nine products tested were obtained from the following sources at, approximately, the temperatures stated: acetylene (700, 800 and 900 C.); California petroleum (880 C.); isoprene (700 C.); Durham Holmside coal (450, 560 and 1,250 C.); human skin (290 C.); yeast (290 C.). It is stated that the pyrogenous materials derived from acetylene, isoprene, petroleum, yeast and skin produce cancer simply because they are all "irritants"; and that the multiplication in the laboratory of instances of "chronic irritation" is not required. To apply this to a substance, after it has been shown to produce cancer, the term "irritant" gives an appearance of explanation which is illusory. There seems to be a tendency at present to state that a substance such as soot gives rise to a cancer because it is an irritant, and at the same time tacitly to

regard it simply as an irritant because it gives rise to cancer; this circular treatment of the matter is of no value at all. The irritation which causes the growth of cancer must be a special kind or must act on some special element in the tissues. No invariable relation has been found between the temperatures at which these various materials are formed and their comparative activity in producing tumors. Thus the three tars made from coal at 450 C., 560 C. and 1,250 C. show an ascending order of potency; the 820 C. isoprene tar is more active than the 700 C. tar; and experiments still in progress indicate that the 920 C. tar will prove more effectual than the 780 C. tar. In all these cases the higher temperature gives the more active product. But, on the other hand, in the case of acetylene, a low temperature (700 C.) gives a product more active than that produced at from 800 to 900 C. The idea suggests itself that acetylene may be a decomposition product common to coal, mineral oils, yeast, skin and isoprene, and that the cancer producing material obtained from these very diverse sources is actually formed from acetylene by the synthetic process discovered by Berthelot. Probably the yield of cancer producing substance depends largely on catalytic reactions which cannot as yet be controlled.

Treatment of General Paralysis and Tabes by Tryparsamide. W. S. Dawson, Lancet **1**:1072 (May 23) 1925.

In none of the twenty cases cited by Dawson was there produced any remarkable result from the use of tryparsamide such as might not have been obtained by the administration of other arsenic compounds. Several cases of paresis have had their downward course arrested, while others have improved to a lesser extent. Whether tryparsamide is really more potent than other arsenicals is not proved in this series of cases, but the drug is certainly worth further trial.

Treatment of Psoriasis. E. C. B. Ibotson, Lancet **1**:1182 (June 6) 1925.

Thyroid extract internally, 1 grain, three times daily, combined with the external use of tar, is advocated by Ibotson as good treatment for psoriasis.

Giant Urticaria. H. W. Acton, Indian Med. Gaz. **60**:197 (May) 1925.

In the treatment of this condition, Acton has been giving 2 minims of a 1:1,000 solution of epinephrin hydrochlorid intramuscularly every day for four or five days, then followed by suprarenalin, 1 gm., and extract thyroideum siccum 0.25 gm. twice a day on an empty stomach for three weeks. This treatment usually enables the patient to return with safety to the particular food to which he was sensitive before treatment. If there is general sensitiveness, it is as well to examine the stools for *E. histolytica* cysts and to examine the size of the liver. Often emetin will cure the amebic infection of the bowel, and at the same time prevent the giant urticaria.

Fever-Inducing Treatment of General Paralysis. A. Marie and V. Kohen, Bull. de l'Acad. de méd. **93**:664 (June 9) 1925.

Three years' observation has convinced Marie and Kohen that milk and nucleinate injections should first be tried in fever-inducing treatment. If the results are negative, in patients not affected with tuberculosis, injections of tuberculin at gradually increasing doses (beginning with 0.0005 gm.) should be used, alternating with bismuth. In certain patients a fever of 39 C. may be

induced with less than 0.5 mg. of tuberculin, while advanced general paralysis may not respond even to 2 or 3 gm. If this method fails, then only should the malaria treatment be applied in young patients without kidney, heart or liver affection. The resulting improvement will be maintained by two or three series of bismuth injections yearly.

TREATMENT OF GENERAL PARALYSIS. CLAUDE and TARGOWLA. Bull. et mém. Soc. méd. d. hôp. de Paris **49**:795 (May 29) 1925.

Claude and Targowla describe two cases in women, aged 35 and 54, among thirty thus treated. They emphasize that the mental condition particularly and certain organic lesions were improved, but persistent reactions in the cerebrospinal fluid showed that the process in the brain and meninges was not checked.

INSULIN TREATMENT OF LEG ULCERS. FAURE-BEAULIEU and DAVID, Bull. et mém. Soc. méd. d. hôp. de Paris **49**:892 (June 12) 1925.

Ten of Faure-Beaulieu and David's patients with leg ulcers presented hyperglycemia, while no sugar was detected in the urine. They were treated with insulin, at a dose of 10 units injected subcutaneously twice a day. In one case the total amount of insulin was 1,600 units; usually, about 500 units. One woman with an ulcer, 11 by 7 cm. in size, and glycemia of 2.12 gm., was cured in two months. She was given 480 units of insulin. A similar ulcer the year before took seven months to heal. Another woman with an ulcer, 7 by 9 cm. and glycemia of 2.41 gm. was completely cured in one month (320 units). One syphilitic woman had had a large and very painful ulcer for four years, rebellious to specific treatment. After two months' injections of insulin, the ulcer, 14 by 10 cm., was reduced by a half. The glycemia in this woman was 2.16 gm. per liter.

TREATMENT OF CONGENITAL SYPHILIS IN THE NEW-BORN. MARFAN, J. des Practiciens **39**:273 (April 25) 1925.

Marfan applies mercurial ointment to infants with congenital syphilis. Otherwise he prescribes a solution of mercury lactate or gray powder by mouth. In infants above 1 year, a solution of mercuric biniodid is used in subcutaneous injections. Intravenous injections of mercury cyanid are valuable in cases with complications in the eyes.

SYPHILIS CONTRACTED BY INFANT DURING BIRTH. BONNET, Lyon. Med. **135**: 479 (April 19) 1925.

Bonnet concludes that this rare event may occur with childbirth the tenth or twelfth day after the appearance of the primary chancre, when the organism of the mother, and consequently that of the baby, is not yet syphilized or immunized. In the "passage case" described, the infant had two chancres on the vertex of the skull.

EMOTIONAL VITILIGO. W. PIERANGELI, Policlinico, Rome **32**:592 (April 27) 1925.

Pierangeli reports a case of almost symmetrical vitiligo which started within ten days after the patient had been frightened by a shooting on the street. She was 16 years of age, and otherwise healthy.

CAMPHOR ERUPTIONS. R. LAMBRI, Policlinico **32**:941 (July 6) 1925.

Lambri reports a case of an itching urticaria after injections of camphorated oil in an adult, and a case in a child of an eruption, resembling scarlet fever, in pneumonia treated with camphor. Another child with grave debility from gastro-enteritis, given injections of camphor in ether, developed an eruption likewise, which subsided when the camphor was dropped.

EPIDEMIOLOGIC STUDY OF LEPROSY. G. R. CALLENDER and T. BITTERMAN, Philippine J. Sc. **27**:9 (May) 1925.

A study was made by Callender and Bitterman of some of the epidemiologic aspects of the histories of 259 lepers. Additional evidence is presented that the earliest recognizable lesion is in the anesthetic area. These data on the location of the primary lesion, added to the data reported by others, favor the theory that the organism enters the body through abrasion or similar wounds in the integument of the exposed parts of the body. The age at which the first symptom appeared in the cases of this series also agrees with the findings of others, that the more susceptible ages are in the first decades, although no age appears exempt.

ENDEMIC PINRA OF TROPICAL AMERICA. A. PENA CHAVARRIA and P. G. SHIPLEY, Rev. med. Latino-Amer. **10**:648 (March) 1925.

This illustrated monograph on this itching, pigmented and tenacious dermatomycosis of tropical America and certain points in Africa, was awarded a prize by the national Academia de Medicina of Colombia. Among its local names are *carato, pinta* and *karatefleck*. The best results in treatment have been obtained with arsenicals and mercurial ointment. Five kinds of fungi were cultivated from the lesions, responsible respectively for the white, violet, black, red or blue patches of pigmentation.

RINGWORM OF FELINE ORIGIN. M. VEGAS, Rev. de méd. y cirurg. **8**:49 (Jan.) 1925.

Martin Vegas comments on the rarity of tinea at Caracas, probably from the small numbers of Russians and other races in whom ringworm is more common. He never encountered a case until recently, and the apparently identical microphyte was cultivated from both the child and the cat in the family.

CEREBROSPINAL FLUID IN SYPHILITIC CHILDREN. GUTFELD and MEYER, Arch. f. Kinderh. **76**:13 (April 30) 1925.

Systematic examination of the blood and cerebrospinal fluid in 155 syphilitic children showed a Wassermann reaction parallel to the clinical findings in only part of the cases. In cases of mental and nervous disturbance, Gutfeld found a positive reaction in the cerebrospinal fluid more often than a negative, but the reaction may be positive without such disturbances, or vice versa. Positive blood tests usually correspond to a positive reaction in the cerebrospinal fluid; the reverse does not hold. The colloidal gold test in the fluid elicited a reaction parallel to the Wassermann test in almost every case. Endolumbar treatment was never used. The clinical findings alone afford definite indications for treatment.

Society Transactions

PHILADELPHIA DERMATOLOGICAL SOCIETY

Regular Meeting, Feb. 9, 1925

J. V. KLAUDER, M.D., *Presiding*

SCLEROUS GLOSSITIS AND GLOSSODYNIA. Presented by DR. GREENBAUM.

C. W., a man, aged 48, had a penile lesion in 1917, and received treatment at intervals for two years. Two recent Wassermann tests were negative, but two Kahn tests were moderately positive. The blood count showed 3,070,000 erythrocytes, 7,250 leukocytes and 65 per cent. hemoglobin. He was presented because of the peculiar appearance of the tongue and the presence of a sclerous glossitis associated with the peculiar red tongue. There was a deep scar on the dorsum, near the circumvallate papillae. The tongue was painful. There was no history of an ulcer where the scar was located. The patient was a smoker.

DISCUSSION

DR. HIRSCHLER: There should be a careful investigation of the patient's gastro-intestinal tract because of the appearance of the tongue.

DR. GREENBAUM: I agree with Dr. Hirschler. If achylia gastrica were present it would be in favor of an early type of pernicious anemia. Though the patient is undoubtedly syphilitic, the complement-fixation tests with Kolmer modifications did not reveal anything, whereas the precipitation test did.

A CASE FOR DIAGNOSIS. Presented by DR. SMITH.

I. C., aged 23, a marine, of Italian parentage, had had an eruption for four years, distributed especially over the arms. The character of the eruption had not changed since it appeared. There were no particular symptoms, and it did not itch. The eruption was composed of minute brownish-red papules in groups.

DISCUSSION

DR. GREENBAUM: Is it possible to have a biopsy? I would suggest the diagnosis of red keratosis pilaris not infrequently seen in association with disease of the eyebrows.

DR. WEIDMAN: I recall cases of tinea versicolor in which the pigmentation around the follicles was much more marked than in the case shown. A differential diagnosis should be made from Darier's disease and arsenical hyperkeratosis. The distribution in patches suggests pityriasis rubra pilaris. I do not think a diagnosis can be made without laboratory procedures.

DR. LUDY: The case is not typical of Darier's disease.

DR. HIRSCHLER: Some of the lesions on the back suggest lichen planus.

DR. TEMPLETON: Can the condition be related to lichen nitidus?

DR. KLAUDER: I do not think so.

MULTIPLE EPITHELIOMAS. Presented by DR. KLAUDER.

A woman presented multiple epitheliomas following a lesion on the back removed with the knife fifteen years ago. Extensive recurrences were removed with arsenical paste and electrodesiccation. The scar resulting from the removal of the epitheliomas on the face by arsenical paste was of the same type as that removed by electrodesiccation. There was a lesion on the arm similar to that in the case presented at the last meeting by Dr. Hart-Drant, and diagnosed as the pagetoid type of epithelioma.

DISCUSSION

DR. HIRSCHLER: If the term pagetoid must be used, it would be better to apply it to such a case as this because of its eczematoid nature.

DR. KLAUDER: The term pagetoid is descriptive of the condition.

DR. GREENBAUM: I would suggest Bowen's precancerous dermatitis.

DR. WEIDMAN: I disagree with Dr. Greenbaum because there is no evidence of a preceding dermatitis.

DR. KLAUDER: The case probably belongs to the same group of cases as Bowen's precancerous dermatitis, but I do not regard it as such.

DR. KNOWLES: I recall five cases very much like the one presented, which were under my care at the time of the meeting. They were the first I had seen, and all seemed to have the appearance of Paget's disease. This would last fifteen or twenty years before ulceration set in. All these patients showed multiple lesions distributed on the covered portions of the body.

GRANULOMA INGUINALE. Presented by DR. DECKER.

S. W., a man, aged 46, colored, married, a porter in a wholesale fertilizer house, during 1912, noticed a small papule in his left inguinal region. This broke down, ulcerated and enlarged. At no time did it heal. At the time of admission to the hospital, January 15, the lesion involved the entire left inguinal region. He was given a 1 per cent. solution of tartar emetic intravenously, starting with 5 c.c. and increasing by 1 c.c. every other day. At the time of the meeting he had received nine injections, totaling 81 c.c. of the solution. The lesion commenced to heal after the first injection, and was entirely closed over when presented.

Smears made after biopsy showed the Donovan bodies.

DISCUSSION

DR. KNOWLES: The response to treatment was marvelous in that the lesion had almost healed after the second injection. The injections should be kept up because of the tendency to relapse.

DR. KLAUDER: Was Dr. Randall's latest preparation used?

DR. GREENBAUM: Dr. Randall, in conjunction with Dr. Abell, has developed two new drugs for trypanosomiasis and granuloma inguinale, sodium-antimony-thioglycocollate and a triamid of that acid. Both are claimed to be much safer than tartar emetic, and recurrences are much less likely to occur.

DR. WEIDMAN: Some conditions of this sort occur around the mouth as well as around the groin.

TROPHIC ULCERS. Presented by DR. LUDY for DR. WALKER.

A man, aged 28, had had neurosyphilis for eight years. He had intermittent loss of control of the sphincters and a number of trophic ulcers, ten in two years. He had received 20 injections of a basic bismuth tartrate preparation trepol, one each week, and is considered to be benefited. He had never had ulcers elsewhere than below the knees.

DISCUSSION

DR. WEIDMAN: The absence of any sensation, together with the inflammatory lesions, reminded one of Morvan's disease.

DR. KNOWLES: The lesions of the left leg would cause a diagnosis of either dermatitis factitia or trophic ulcers, with more evidence in favor of the former.

DR. LUDY: The patient was referred by Dr. Wilson, and was seen by Dr. Mills, and a diagnosis of multiple sclerosis was made. The treatment was given at their suggestion, and the patient admitted that there had been marked improvement.

PSORIASIS. Presented by DR. SMITH.

P. P., a man, aged 54, had an acute dermatitis venenata on September 16, after pulling weeds. It consisted of vesicles and edema appearing on the hand, fingers and inner side of the thighs. The skin was clear eight days after leaving the hospital, but the patient had had marked pruritus ever since. On December 7, intensely itchy patches appeared over the elbows and legs, which resembled psoriasis. The patient remembered that he had had a patch on his leg for two or three years. He was very sensitive to irritating drugs. He was shown because of the appearance of the lesions following the acute dermatitis at his age.

DISCUSSION

DR. WRIGHT: I agree with the diagnosis of psoriasis. About ten years ago there was a furore over autohemotherapy. Recently Dr. Schamberg and I have been using a method of direct blood injection; 10 c.c. of blood are withdrawn from the arm and injected immediately into the buttock as a preliminary to local treatment. After this treatment some patients who cannot tolerate mild remedies locally may tolerate them well, even to greater strengths. It would appear that the injection of the blood prepares the skin for local remedies by a process of desensitization.

DR. KLAUDER: This procedure decreases the irritability of the skin by changing the metabolism, the bases, calcium, protein, etc. The method applies to the entire group of therapeutics.

A CASE FOR DIAGNOSIS. Presented by DR. GREENBAUM.

R. M., colored, an American, aged 29, had a primary lesion of the upper lip about July 1. He received fourteen injections of neo-arsphenamin, and in the second week after treatment was stopped, he developed a rash limited to the neck. Microscopy for fungus was negative. The lesions were pinkish red, scaly, oval and round, and did not itch. Neo-arsphenamin was discontinued and bismuth medication started. There was a possibility that it was a localized arsphenamin dermatitis.

DISCUSSION

DR. KLAUDER: A localized type of pityriasis rosea, the supraclavicular type, should be considered.

A CASE FOR DIAGNOSIS. Presented by DR. HART-DRANT.

L. H., a woman, colored, aged 24, in April, 1924, developed a typical pityriasis rosea with its primary plaque and usual topography. In June the lesions began to develop a horny follicular element, which increased until by September the follicles within the lesions were topped with horny spikes. The follicles in the intervening skin were unaffected. At this time the Wassermann test was negative. Three provocative doses of neo-arsphenamin were administered intravenously, and improvement in the lesions was noticed, although the Wassermann test still remained negative. Six doses of neo-arsphenamin were given and were followed by a slight regression in the lesions. It was noticed that a dosage of 0.3 gm. of neo-arsphenamin was as effective as larger doses. Sulpharsphenamin was given intramuscularly but did not have any effect on the eruption. A biopsy was made and showed nothing.

DISCUSSION

DR. KNOWLES: The distribution and grouping are characteristic of lichen scrofulosorum.

DR. HIRSCHLER: When I first saw the patient, there was marked pigmentation where the pityriasis rosea lesions had been. The follicular lesions were developing on top of the pigmented spots and largely over the trunk. They were then more numerous than at the time of presentation. I thought of lichen spinulosus.

DR. WRIGHT: Undoubtedly some of the lesions suggested lichen spinulosus, but in that disease it is not customary to have an underlying inflammatory condition. I agree with Dr. Knowles in the diagnosis of lichen scrofulosorum.

LUPUS VULGARIS. Presented by DR. KLAUDER.

A girl, aged 17, presented lesions on the buttocks suggestive of lupus vulgaris, but the laboratory reported only chronic inflammatory tissue.

DISCUSSION

DR. LUDY: I agree with the diagnosis of lupus vulgaris.

DR. WEIDMAN: Whereas the apple-jelly nodules are useful servants, dermatologists stickle too much on their presence in lupus vulgaris. Many times the infiltration is diffuse.

PAGET'S DISEASE. Presented by DR. LUDY for DR. STROHM.

J. O., a man, aged 60, presented a lesion on the anterior chest wall of twenty years' duration, which was itchy. The patient had healed lesions on the scalp, back and groin. The lesions on the scalp were epitheliomas and had been treated by the roentgen ray.

DISCUSSION

DR. WEIDMAN: I consider this a case of morphea-like epithelioma.

DR. KNOWLES: I thought these lesions benign until change was manifested by ulceration and elevation of the margin.

Dr. Weidman: A case affecting the nipple of the male mammary gland and diagnosed as Paget's disease under the microscope was found to be basal cell epithelioma with no pagetoid features.

Dr. Klauder: Are there any benign cases of epithelioma?

Dr. Ludy: What was the effect of roentgen-ray treatment? The patient had had ten treatments, and the lesions on the scalp and back had cleared up.

Dr. Brown: Roentgenotherapy is effective when preceded by trichloracetic acid a few weeks before the application of the roentgen rays.

Dr. Knowles: Some of these lesions itch as intensely as eczema.

Granuloma Annulare. Presented by Dr. Hart-Drant for Dr. Corson.

A colored girl, aged 3 years, presented several lesions of granuloma annulare, of six months' duration. The lesions were typical in character and located on the hand, forearms and thigh. There was spontaneous disappearance of lesions from the back. No treatment had been given.

Patricia Hart-Drant, M.D., Secretary

DETROIT DERMATOLOGICAL SOCIETY

Regular Meeting, Feb. 17, 1925

Udo J. Wile, M.D., *Presiding*

Tuberculous Glossitis. Presented by Dr. Stevens.

R., a man, had had recurring, persistent small ulcerations on the under surface of the tongue for about five years. The ulcers were deep, with infiltrated bases, and painful. Aple jelly nodules could be seen through the diascope. There was a history of pulmonary tuberculosis, and roentgenologic study confirmed this diagnosis. The lingual ulcerations had disappeared rapidly under treatment with the quartz lamp, but had recurred.

DISCUSSION

Dr. Jamieson: Most cases of tuberculous glossitis occur in patients with pulmonary tuberculosis.

Dr. Wile: Most cases of tuberculous infection of the lips and tongue are serious because of the gravity of the associated pulmonic condition, but this case indicated that the rule was not invariable, for the patient was in fair health, with chronic fibroid tuberculosis of the lungs.

A Case for Diagnosis. Presented by Dr. Wander.

A. R. M., a housewife, had first noticed a burning erythematous eruption on the feet fourteen months previously. This condition had gradually grown worse, and after seven months, following parturition, the hands, elbows, knees and lateral surfaces of the legs became involved. The skin of the palms and soles became brownish, thickened and fissured. The general health of the patient was good, and there were no evidences of syphilitic infection.

DISCUSSION

DR. WOLLENBERG: This condition resembles erythromelalgia, but there is no pain and the erythema does not increase when the affected part is dependent. It is suggestive of beginning dermatitis exfoliativa.

DR. JAMIESON: Judging by the location and pigmentation and the apparent history of abscess of the thyroid gland, I suggest that these skin changes are pellagroid in type but of endocrinous origin.

DR. BIDDLE: In spite of the absence of certain signs, this seems to be a case of pellagra or some deficiency disease.

DR. STEVENS: The sharp outlines of the patches and their symmetry suggest that the condition is pellagra.

DR. VAN RHEE: The condition is possibly due to a disturbance of the endocrine glands.

DR. VALADE: The protrusion of the eyes might be of help in the diagnosis.

DR. DOTY: The lesions resemble those of pellagra. A similar case of pellagroid eruption, under my care, has been cleared up with thyroid medication and small doses of roentgen rays.

DR. PERKINS: Some thyroid dysfunction might be causative in this case. I have seen two similar cases with thyroid changes.

DR. WOLLENBERG: I have never seen pellagra with such advanced lesions without severe toxic manifestations.

DR. WILE: There are two other possibilities in this case. It resembles pellagra, but I have seen pityriasis rubra pilaris start like this. When the endocrine theory was discussed, we were getting at the same thing. Again, this might be a case of early acrodermatitis chronica atrophicans, but the presence of hyperkeratosis and the type of lesions on the knees argued against that possibility.

DR. PARKHURST: I at first felt that this was an atypical case of pellagra, but I am now inclined to agree with Dr. Wile as to the possibility of it being early pityriasis rubra pilaris.

LEPRA. Presented by DR. JAMIESON.

A. I., an Italian, aged 19, presented nodules of a year's duration on the face and extremities. A brother, an uncle and a cousin, all in Italy, were said to have had similar eruptions. The patient had come to America eighteen months previously. On the elbows, forearms, knees, legs and face were many light bluish-red nodules, more or less elevated, and varying from the size of a hickory nut to that of a small orange. There were no subjective sensations, and some local anesthesia was present. The soft palate and fauces were swollen and erythematous, with increased secretion, but not painful, and there were no nasal lesions to be seen. The ulnar nerves could be palpated. Throat smears were negative, but an acid-fast bacillus was found in a section from a nodule. The Wassermann reaction of the blood was negative.

DISCUSSION

DR. BREITENBACH: I agree with the diagnosis. There were anesthetic areas.

DR. JAMIESON: What can be done for the patient?

DR. PARKHURST: Chaulmoogra oil derivatives may be used. Since there are no open lesions, treatment may be ambulatory.

DR. WILE: This is the second patient from Malta that I have seen with this disease; this patient said that he had been there for one month. The other case had been of the maculo-anesthetic type.

DR. WOLLENBERG: Probably much lepra came to Italy from Brazil by immigration.

TUBERCULOSIS VERRUCOSA CUTIS. Presented by DR. PERKINS.

W. B., a cobbler, aged 34, married, had been found to have pulmonary tuberculosis. There was a verrucous lesion of two years' duration situated on the dorsum of the hand.

DERMATITIS SEBORRHEICA. Presented by DR. BIDDLE.

A. L., a woman, married, aged 26, presented a dry, diffuse erythematosquamous eruption on the face, arms and trunk, on an ichthyotic base, the condition having first appeared four years previously, at a time when the patient was in the third month of pregnancy. There was apparent sensitization to many foods, the patient being subject also to severe asthmatic attacks.

DISCUSSION

DR. DRESCHER: There seemed to be an endocrinous element in the etiology of this case.

DR. PARKHURST: This type of case is frequently seen: A patient with a pronounced tendency to seborrheic dermatitis, in which secondary lichenification readily appeared; there is often an associated asthma, but attempts to eliminate apparently offending foodstuffs have been disappointing. Good results usually follow fractional roentgen-ray treatment.

DR. BIDDLE: In many of these cases the patients fail to cooperate in the treatment, which seems to account for the difficulty of effecting a cure.

DERMATOPHYTOSIS. Presented by DR. JAMIESON.

Mrs. D., aged 45, presented vesicular and scaling patches on the palms and sharply defined erythematosquamous patches on the intercrural and sacral regions, the duration of the condition being four years.

CHANCRES? Presented by DR. PERKINS.

R. B., a young man, had had two large pinhead sized ulcerations on the prepuce for a week. Dark-field examinations had been negative, and the Wassermann reaction of the blood was negative.

DISCUSSION

DR. PARKHURST: The lesions appear to be herpetic, but I would suggest that the Wassermann test be made with the fluid from the ulcers.

DR. WILE: In such cases the clinical diagnosis is important. The patient should be given the benefit of the doubt, and arsphenamin administered.

H. J. PARKHURST, M.D., Reporter.

CHICAGO DERMATOLOGICAL SOCIETY

Regular Meeting, Feb. 18, 1925

E. P. ZEISLER, M.D., *Presiding*

PARAPSORIASIS (BROCQ). Presented by DR. ORMSBY.

A man, aged 67, was first seen in April, 1920, when the disorder had been present for two years. There were patches varying in size from that of a dime to that of a palm and larger. They presented fine scaling, were well defined and slightly erythematous, with a brown tint. There were no subjective symptoms. The lesions were situated on the arms, forearms, trunk, thighs and legs. From that time until January, 1925, the patient was not seen. On his return he stated that his condition had been much improved, but the lesions were recurring. At the time of presentation most of the lesions were on the lower extremities.

On account of an enlarged gland in the axilla, a blood examination was made and revealed the following findings: Hemoglobin, 83 per cent.; red cells, 4,670,000; leukocytes, 31,200; differential leukocytes: small lymphocytes, 71 per cent.; large lymphocytes, 5 per cent.; transitionals, 2 per cent.; polymorphonuclear neutrophils, 18 per cent.; eosinophilic neutrophils, 2 per cent.; eosinophilic myelocytes, 1 per cent.; basophils, 1 per cent.

The question of relationship between the blood findings and the cutaneous disorder was not decided.

DISCUSSION

DR. WILE: The case is interesting as indicating a connecting link between parapsoriasis and the malignant lymphomas, particularly those which develop into granuloma fungoides. I believe pathologists are beginning more and more to regard all of these essential tumors of the granuloma fungoides type as general manifestations of lymphoblastomas. You have probably all seen cases of parapsoriasis which later developed into granuloma fungoides. In the beginning this patient probably had an aleukemic leukemia of the skin.

DR. SENEAR: We presented a boy at the January meeting whose case was almost identical with this one. He presented a typical parapsoriasis, a suggestive blood picture, and generalized adenopathy had been present for three or four years.

DR. FOERSTER: There is no itching. If the condition is going to eventuate in mycosis fungoides it will probably not do so without preliminary pruritus.

DR. ORMSBY: The case is interesting because the patient first presented symptoms of parapsoriasis of Brocq and has now developed the blood findings of leukemia. I have seen two patients who apparently had parapsoriasis for several years, with very little itching, but who eventually developed granuloma fungoides. It is difficult to determine whether the cutaneous lesions in this case are related in any way to the blood findings. The patient shown by Dr. Senear at the annual meeting makes this case of more interest as they are similar both as to cutaneous lesions and blood findings.

A CASE FOR DIAGNOSIS. Presented by DR. MITCHELL.

A boy, aged 11, presented a disorder which had been present for three years. There was a history of lesions in the right submaxillary region in infancy, and it was said that his father, now dead, had had similar lesions

during infancy or childhood. There had been no cough. One sister, aged 12, and a brother, aged 9, and the patient's mother were living and well.

There was a palm-sized, horseshoe-shaped lesion with bluish-red central marking situated over the right deltoid, with discharging marginal, superficial ulcerations. Similar but smaller lesions were present on the left deltoid, both elbows, both wrists and both knees. There was a large, soft hypertrophic scar in the right submaxillary region. The right radius was broader than the left. There were no dental or bony deformities besides this. The boy was fairly well nourished and of average intelligence.

DISCUSSION

DR. OLIVER: I presented an almost similar case last year. The patient was a boy, aged 11, who had lesions on the arms, legs and back. The final diagnosis was scrofuloderma, though several members thought that syphilis should be considered.

DR. FOERSTER: I think the patient shown by Dr. Oliver had lesions of tuberculosis colliquativa.

DR. WILE: I have an exactly similar case under observation at present in a boy of about the same age. The lesions involved almost the same locations. The histologic picture of the case, and in most of the cases Dr. Foerster referred to as tuberculosis colliquativa, was not that of lupus. It is so full of giant cells that pathologists often report foreign body reaction. I considered it a peculiar type of embolic tuberculosis.

DR. FOERSTER: We had under observation at the Wisconsin State General Hospital two small Indian boys with lesions of this type but with definite relation to the glands, which I looked on as cutaneous tuberculosis but which others diagnosed as sporotrichosis. An attempt is being made to establish the diagnosis of sporotrichosis by culture. It is well to consider this in connection with the present case, as sporotrichosis can assume so many different forms.

DR. MITCHELL: I saw the patient for the first time just a few moments before the meeting, when he was brought in by a nurse from one of the municipal tuberculosis stations. The nurse knew nothing of the history and the child knew less. As soon as possible I shall try to get a complete history and a biopsy.

ALOPECIA CICATRISATA; PSEUDOPELADE. Presented by DR. WAUGH.

A man, aged 47, whose disorder had been present for one year. A number of areas in the occipital region of the scalp were either partially or entirely free from hair. The areas varied in size from that of a split pea to that of a large coin, some were circular and others irregular in outline. The older areas showed a slight atrophy of the skin and were smooth and shining; the more recent areas were erythematous but not scaling. No pustular lesions were present, and no subjective symptom was complained of.

DISCUSSION

DR. SENEAR: I thought of lupus erythematosus or folliculitis decalvans. I do not think it possible to make a differential diagnosis at this time.

DR. WILE: I agree with Dr. Senear.

DR. ORMSBY: My conception of pseudopelade is not presented in this case. In that disorder there are slight inflammatory changes, and the atrophy is rarely so marked as in this instance. I believe it is an inflammatory process, but it is impossible to say whether it is folliculitis decalvans or lupus erythematosus, although from the history the former seems more probable.

A CASE FOR DIAGNOSIS — KERION? Presented by DR. OLIVER.

A man, aged 65, had a lesion on the chin which had been present for ten weeks. It was definitely raised, indurated, the size of a half dollar and papillomatous and verrucous at the edges. It had increased rapidly in size. No pus was evident, but a cheesy material could be expressed. There were no subjective symptoms. Examinations for the ectothrix had so far been negative, but the lesion was rapidly involuting under radiotherapy.

DISCUSSION

DR. STILLIANS: I would suggest a diagnosis of blastomycosis, although the history does not agree with that disorder. I do not think a tuberculous lesion would develop so rapidly, and the diagnosis of vegetating dermatitis does not appeal to me.

DR. MCEWEN: Blastomycosis is the most probable diagnosis, but I am not entirely satisfied with it.

DR. FOERSTER: I had thought of the case as belonging in the group of mycoses or as possibly a dermatitis vegetans.

DR. WILE: I believe that subsequent search will reveal the presence of an organism — quite likely an infection of the kerionic type of ringworm.

DR. ORMSBY: I agree with Dr. Wile, and I believe that blastomycosis can be definitely ruled out. The clinical features are a little unusual, but I believe the lesion is an example of trichophyton infection.

DR. OLIVER: I believe it is a vegetating fungus lesion. There has been no pus at any time, and several examinations of the cheesy material that could be expressed showed no mycelia or spores.

KAPOSI'S SARCOMA. Presented by DR. FINNERUD.

An Hungarian Jewess, aged 29, in good health, who had been married six years and who sought treatment of the scalp, said that the hair had been falling from the crown for seven years and had not been regrowing.

She was shown because of nodules of the skin of the extremities, back and scalp, of six years' duration. There were ten lesions and none had ever disappeared. There was no subjective symptom. The first lesion appeared on the lateroposterior surface of the right arm as a hard red lump. No lesions had appeared recently, and those present did not seem to be growing. The patient was not concerned about them. There were two lesions each of the right and left thigh and left leg and one each of the right leg, shoulder and scalp. The lesions all were about pea-sized, with the exception of one on the right forearm which was about twice that diameter. All were brownish-red, firm, and on palpation sharply localized. The larger lesion of the right forearm was more bluish red, flat, and its surface was stippled with grayish-white puncta and streaks.

She also had a painless, immobile swelling on the right side of the back of the neck which was said to have been present for two months. It was deep-seated, firm, the size of a hen's egg, and the patient did not think it was increasing in size. Histologic sections were presented.

DISCUSSION

DR. WILE: I should venture the diagnosis of angiosarcoma, based on the microscopic picture. I considered the picture suggestive of tumor around the blood vessels, and the general picture is that of the relatively nonmalignant tumors. I think it might be brought into the group of Kaposi's sarcoma.

DR. FINNERUD: Practically all the pigment is limited to the epidermis in the section which has been shown, but in one of the lesions on the leg there is definite deep discoloration at the center, and I believe a biopsy there would show pigment changes deep in the corium as well. The patient is presented as having an unusual case of Kaposi's idiopathic sarcoma, the diagnosis having been arrived at largely from the histologic section.

CORNU CUTANEUM. Presented by DR. WAUGH.

A colored man, aged 30, presented a lesion on the right index finger which was said to have been present since childhood. It was a typical horn, pointed, curved, about 1 inch (2.5 cm.) long, having the appearance and hardness of true horn.

LUPUS ERYTHEMATOSUS OF THE BUCCAL MUCOSA. Presented by DR. FINNERUD.

A man, aged 31, French-American, who was in good health except for a bad cough of two or three weeks' duration, gave a history of an eruption of the face which had been present for three years. It began on the nose, and soon appeared on the upper lip, behind the right ear, and on the right cheek, never in the scalp. All the lesions had disappeared except that on the right cheek. He had used several different ointments, but no other treatment had been employed. When first seen two weeks previously, he was unaware of a lesion in the mouth, but had noticed a local sensitiveness to sour foods. There was a typical lesion on the left buccal mucosa, adjacent to the lower molars.

DISCUSSION

DR. ORMSBY: Until Dr. Finnerud recently called attention to lesions of the mucous membrane in lupus erythematosus, these lesions had not been given the importance they deserve. It seems probable that numbers of such cases would be noted if search were made for them.

DR. FINNERUD: I believe that the lesions of the mucous membrane of lupus erythematosus are often overlooked because they are usually without subjective symptoms. This man did not know that he had the lesion. In two reports in the literature, those of Smith and Culver, these lesions were found present in 28 and 27 per cent. of their cases, respectively, but most of the other observers, including Haslund, have reported lesions of the lip and mucous membrane as occurring in only 5 to 15 per cent. of the cases. They are much more common on the lower lip than on the mucous membranes and occur next in frequency on the mucous membrane adjacent to the lower molars, on the hard palate, nasal mucosa, gums and tongue. I do not know whether certain of the older lesions, such as the one in this case, could be

definitely diagnosed as lupus erythematosus if there were no cutaneous lesions, but usually the comparatively new lesions of the mucous membrane as well developed or even receding lesions can be recognized without difficulty. In this lesion the margin has little infiltration, and in most places its gradual slope into the surrounding healthy mucosa and its abrupt slope centrally cannot be seen distinctly. The telangiectases characteristic of early lesions have been placed by delicate epithelial puncta and streaks, as is true of all older lesions.

DR. FOERSTER: Several years ago, I showed a patient with a single lesion of lupus erythematosus, the size of a small finger nail, on the mucous membrane of the lower lip. It remained as an isolated lesion for five or six years, and then additional lesions appeared on the scalp and face. This demonstrated the existence of isolated lesions of the mucous membrane preceding cutaneous lesions.

PERIADENTITIS MUCOSA NECROTICA RECURRENS? Presented by DR. STILLIANS.

An American, aged 39, a coal miner, complained that his tongue had been swollen and discharging pus for four months. Four or five swollen areas had appeared, ruptured, discharged a small amount of pus and healed again. There had been no pain, although the tongue was tender at the tip. He gave a history of frequent attacks of sore throat and pain in the ear, but had had none of these since the trouble with the tongue developed. Fifteen years before he had had a group of small genital sores, one of which persisted for three months, but this was followed by no rash, sore throat or loss of hair.

The tongue was deformed by several nodules 0.5 to 1.5 cm. in diameter, which were elastic and not tender. About 2 cm. back of the tip on the dorsum was a small fissure from which a membrane protruded. Traction on this brought out a thin membrane 2.5 cm. long.

DISCUSSION

DR. WILE: I believe they are multiple gummas of the tongue which involve the muscularis.

DR. ZEISLER: I agree with Dr. Wile.

DR. MCEWEN: I agree with Dr. Wile.

DR. STILLIANS: When the patient was first seen he had fissures from which he could remove a membrane. The history of the lesions breaking down and then healing puzzle me, although the man gave a history that was suggestive of syphilis.

DR. WILE: I believe it is exactly the type of case which is likely to undergo malignant degeneration rapidly if the condition is not recognized, and that it should be treated vigorously for this reason.

NEVUS ANEMICUS. Presented by DR. STILLIANS.

A woman, aged 39, presented several white spots on the chest, which she said had been present since childhood and which had not changed materially since that time. The lesions were white macules and patches, discrete or confluent, varying in size up to 0.5 cm. in diameter, which were grouped about the right sternoclavicular joint in an area about 6 by 4 cm. They became red when the skin was irritated by ice and friction. Sensation was normal.

DISCUSSION

DR. STILLIANS: The patient has recently acquired syphilis, but the other lesions have been present for a long time.

MELANOMA OF THE WRIST. Presented by DR. STILLIANS.

A woman, aged 23, said that at the age of 13 a schoolmate stuck a pen wet with ink into her wrist, and that the small tumor appeared at that time. It had not increased in size. The lesion was a sharply defined, round, dark grayish-blue papule 0.3 cm. in diameter, which was smooth and firm, situated on the left wrist.

DISCUSSION

DR. ZEISLER: I believe the diagnosis of benign melanoma is justified, and that it is a not uncommon lesion.

DR. SENEAR: I believe it is the type of lesion Dr. Zeisler mentioned, but because of the shading off of the lesion into the surrounding tissue I would look askance on any operative procedure unless it was thorough. I believe the condition presents malignant possibilities, although it is not malignant at present.

DR. STILLIANS: I should prefer to leave it alone.

IMPETIGINOUS SEBORRHEIC DERMATITIS. Presented by DR. STILLIANS.

A Jew, aged 20, said that he had had dandruff for several years. About the middle of December, 1924, his scalp became very sore, and finally began to ooze a material with a disagreeable, sour odor. The hair fell rapidly. He received several injections of neo-arsphenamin and white precipitate ointment was applied to the scalp, which was followed by improvement. When first seen by Dr. Stillians on Jan. 24, 1925, the entire scalp was a deep brownish-red, covered with large scales, and almost denuded of hair in some areas. Since then he had received three roentgen-ray treatments, totaling five-eighths of an erythema dose, and one suberythema dose of ultraviolet light, followed by only moderate improvement.

DISCUSSION

DR. OLIVER: I have seen a similar case in which Dr. Zeisler had prescribed a one-half strength crude tar ointment, and the patient did very well. The scalp cleared up rapidly, whereas former treatment had no effect. There was no response to white precipitate ointment.

DR. ZEISLER: I obtain much better results in seborrheic dermatitis by the use of coal tar than with sulphur or any other treatment.

TELANGIECTASIA (FAMILIAL). Presented by DR. STILLIANS.

A Polish laborer, aged 29, with severe heart trouble, said that his disorder had been present since infancy, and that two sisters had the same condition.

On the mucous surface of the lower lip were from twenty-five to thirty dark bluish-red macules, which were round or angular, some composed of parallel striae. They were pin-point to 0.3 cm. in diameter. A few smaller ones were situated on the tip of the tongue and upper lip, and a few could be seen on the palpebral conjunctiva. Some of them disappeared on pressure, but others did not. Fordyce's disease was marked on the lips, but there was

little inside the cheeks. Blood examination showed 6,400,000 red cells, 3,050 white cells, hemoglobin 70 per cent. The differential count was: polymorphonuclears, 68 per cent.; large mononuclears, 3 per cent.; lymphocytes, 15 per cent.; eosinophils, 14 per cent.

One sister, aged 23, had three lesions at the center of the lower lip, 0.2 cm. in diameter, and many small ones on the lip, tip of the tongue, inside the right cheek and on the palpebral conjunctiva, with some linear telangiectasis also. Her pulse was 84; temperature, 99.2 F.; blood pressure: 118 systolic and 78 diastolic; hemoglobin, 90 per cent. There was a history of frequent nose bleed up to two months previously, but since then this had occurred only at the menstrual period. The cardiac area and sounds were normal.

Another sister, aged 26, presented numerous fine, punctate telangiectases on the lower lip, tip of the tongue, inside the left cheek and in the left palpebral conjunctiva. She had a heart murmur over the right upper part of the chest, which was systolic. She gave a history of dyspnea and frequent nose bleed. Her pulse rate was 90, temperature 99 F., blood pressure 135 systolic and 78 diastolic. She had two children who were well, and she said there were no lesions on their lips.

DISCUSSION

DR. SENEAR: I believe the case belongs in the group of familial telangiectasias with a hemorrhagic tendency. The man and his sisters gave a history of nose bleed.

DR. ORMSBY: I had a family group of this sort a few years ago, with much the same history. These patients had telangiectatic lesions and gave a history of having epistaxis.

DR. STILLIANS: The cases are interesting because of the involvement of the mucous membrane. One of the patient's sisters had an involvement of the mucous membrane inside the cheek and on the tongue.

PITTSBURGH DERMATOLOGICAL SOCIETY

Regular Meeting, Feb. 19, 1925

HERBERT G. WERTHEIMER, M.D., *President*

LICHEN PLANUS SCLEROSUS ET ATROPHICUS. Presented by DRS. GUY and JACOB.

A woman, aged 47, presented a palm-sized patch on each shoulder, the edges of which were slightly raised and infiltrated, the surface in places being wrinkled and in others slightly verrucose. The central area was in part clear and in part involved by lentil-sized white papules in annular arrangement. Satellite white papules were noted, some of which showed central black, horny plugs, while others showed atrophic changes. Itching of moderate grade and intermittent character was noted subjectively.

DISCUSSION

DR. PHILLIPS questioned the diagnosis of lichen planus sclerosus et atrophicus, and thought the condition looked like atrophy.

DR. JACOB said that he saw the case on a dark day and thought as Dr. Phillips, but in good light the condition looked like lichen planus sclerosus et atrophicus.

DR. GUY said that the case presented a typical example of the diagnosis as given. The white papules with keratotic centers in annular arrangement and the secondary atrophic changes were diagnostic. A biopsy was made and the result would be reported.

ALOPECIA TOTALIS. Presented by DR. PHILLIPS.

H. S., a girl, blonde, aged 11 years, a student, presented a total alopecia of the scalp, eyebrows and eyelashes. This condition started in June, 1922, and by December of that year there was a total alopecia. This condition did not immediately follow any sickness, although the patient had always been a "delicate child," She came through whooping cough, measles, chickenpox and mumps as well as her brothers and sisters, who have never had any such condition as that presented by the patient. More than a year later, while receiving quartz light therapy to the scalp, her eyelashes and eyebrows appeared and remained although no direct treatment had been given to them. On two or three occasions, there appeared over the scalp a coating of downy hair which lasted for about three weeks and then disappeared. At the time of presentation, the patient was above normal height; although her weight was below normal — she weighed 60 pounds (27.2 kg.) — appetite good, there was no general lassitude and she played as much as her playmates, she slept well, and maintained a normal average in her classes at school. At a glance, she appeared anemic, lacking pigmentation in the skin; but blood examination revealed a normal picture, with hemoglobin between 90 and 100 per cent. General examination was negative for any pathologic condition. As treatment she had received tonics, iron, cod liver oil, pluriglandular extract and quartz lamp therapy maintained at the point of erythema over a period of several weeks. After nearly three years of treatment, however, she still had a total alopecia of the scalp.

DISCUSSION

DR. NORRIS said that in a number of cases total alopecia has responded to quartz light when other measures have failed.

DR. BEINHAUER showed a picture of a similar case in a young boy, in whom alopecia of six years' duration, with corneal ulcer, followed a severe carbide explosion. The patient was given thyroid extract, 0.1 gm. and ultraviolet ray in erythema doses, causing permanent regrowth of hair in isolated areas.

DR. CRAWFORD asked whether there was defective vision and whether there had been any psychic disturbances. He said the patient had not responded well to treatment, and suggested trying the painting of large areas of the scalp with phenol along together with parathyroid gland extract internally.

DR. PHILLIPS said that treatment does not have much effect, and that patients with localized cases get well while those with cases of total alopecia do not.

CHRONIC SUPERFICIAL EXCORIATION OF TONGUE. Presented by DR. PHILLIPS.

J. H. M., a woman, aged 28, a housewife, presented on the right side of tongue one large and several small areas of excoriation. These lesions were circular or oval, sharply defined, very red, and showed a loss of the superficial layer of the epidermis. Some areas retained a few papillae, while in others they were entirely absent, giving a smooth appearance. The patient said that these lesions had been appearing and disappearing for the past year.

The duration of any single patch was not longer than seven days. At no time had there been longer than a three week period of freedom from these lesions. The only discomfort was caused by vinegar or very hot foods. Grapefruit, oranges, mustard, spices, etc., had no effect on it. So far as could be ascertained, there was no connection between gastric disturbance and an outbreak of these lesions. The patient was in excellent health. The Wassermann test was negative, as well as a general physical examination. In the way of treatment she had used various mouth washes, and two applications of roentgen-ray (½ skin unit dosage each) had had no effect on the cause of the disease.

GLOSSITIS (INTERSTITIAL). Presented by DR. WERTHEIMER.

A woman, aged 34, married, for a year had presented two cherry-seed sized, firm, nonpainful, deep seated nodules on the right lateral surface of the tongue just anterior to the middle. Under antisyphilitic treatment, the area had decreased somewhat in size, and now remained stationary. There was a history of syphilis thirteen years before. In January, 1925, the blood Wassermann test was four plus.

DISCUSSION

DR. BUSMAN said that he could hardly call the condition an interstitial lesion of the tongue, at is was very superficial and freely movable. The button-like induration made it look like the remaining induration of a primary lesion. However, the lesions no doubt were of syphilitic nature.

DR. PHILLIPS said that he thought it was a localized glossitis, not interstitial, but perhaps a sclerosis following a primary or tertiary lesion.

DR. WERTHEIMER reiterated that the lesion for a time had responded to antisyphilitic treatment.

ANGIOMA. Presented by DR. BARR.

H. B. C., a woman, white, aged 43, a housewife, American, presented on the back of the right ear a purple, oval, dime-sized, smooth, soft, semiglobular tumor of eight years' duration, on the surface of which were several dilated capillaries. The tumor was first noticed as a flat, bluish discoloration about half its present size. There were no subjective symptoms until about one year before presentation, when it became slightly tender to pressure and occasional slight pricking sensations were felt in the lesion. No treatment had been used.

DISCUSSION

DR. CRAWFORD believed that it was a simple angioma resulting from trauma, and that it should be dissected out surgically. He said that there was no definite pathologic condition, but possibly the development should be kept in mind.

CONGENITAL SYPHILITIC OSTEOMYELITIS OF THE OS CALCIS. Presented by DR. CRAWFORD.

B. J., a baby, colored, aged 4 months, had a broken down gummatous lesion consisting of a purplish swelling of firm consistency and a superficial irregular ulceration over the outer surface of the left ankle between the malleolus and the heel. A roentgenogram of the foot showed the tarsal bones in their early stage of development, and in the os calcis an irregular rarefaction and necrosis

involving fully 40 per cent. of the bone. The blood Wassermann test was positive. Dr. Crawford said that syphilis usually attacked the diaphysis or epiphyses of long bones. This lesion was unusual because medical literature did not reveal very much on the subject.

QUININ ERUPTION. Presented by DR. CRAWFORD.

J. F., a man, aged 40 years, a barber, had presented a frequently recurrent itching eruption in various areas of the body for the past nine years. The eruptions were usually quite similar, and consisted of patchy, erythematous areas on the trunk, face and extremities. The palms, soles and eyelids were often swollen and red, and accompanied by a burning pruritus which in a few days would subside with a fine exfoliation about the eyelids and a more or less complete shedding of the upper layers of the palms and soles. He had noticed the eruption on a few occasions following the ingestion of bromoquinin, or when he took quinin for a "cold." In his work, he frequently used hair tonics which contained quinin. The present eruption had followed the ingestion of quinin for a "cold." The eyelids were swollen, as were the palms and soles, and there were erythematous patches of bright red color on his cheeks, neck, arms, forearms and thighs and a few scattered patches on the trunk. All were itchy, and he had predicted the exfoliation in the edematous areas as had previously occurred. Dr. Crawford said that he thought the patient absorbed quinin from the use of quinin hair tonics in his work which induced his recurrent eruptions.

FOX-FORDYCE DISEASE. Presented by DR. BEINHAUER.

A. M., a woman, aged 40, unmarried, a housekeeper, had a severe pruritus about the axillae and pubic regions. The patient said that the pruritus began suddenly one year before under the left and then under the right axilla and one month later she noticed a similar condition over the pubic region. Four months before presentation, she noticed a slight but increasing pruritus about the left nipple. Recently, she complained of a similar condition about all flexor areas of the body, modified at the menstrual period. Seven years before, the patient had undergone an operation for cystic ovaries, and three years later the right breast was removed for malignancy. The patient's general health had been good, with the exception of intermittent attacks of constipation. Both axillae showed definite pigmentation, on which was a lichenified, papular eruption with excoriations. The most recent papules were follicular in type, being pierced by a hair, the latter showing broken tufts in places. The papules were at the periphery of the areas involved and were acuminate, while the center of the area was flat, shiny and lichenified. An underlying adenitis was present. The left breast showed no definite excoriations or papules. The pubic region was slightly pigmented and showed many excoriations. On the palms was a typical fissured squamous eczema. The pruritus had resisted all forms of treatment. This was the second case presented by Dr. Beinhauer within two years with operative findings of cystic ovaries. A case reported two years before showed an ovarian cyst on operation for menstrual disturbance.

LIPOFIBROMAS OF THE SKIN. Presented by DRS. COHN and WILLARD.

Z. F., a woman, aged 40, Mexican, presented on the forearms, firm, subcutaneous, fusiform painless lesions, freely movable and not tender. There was no overlying inflammatory reaction. The lesions were rather soft, but

an occasional one was hard. The patient stated positively that the lesions had appeared and disappeared without treatment. The Wassermann reaction was one plus, icebox two plus. Two lesions removed for microscopic examination revealed identical findings. The structure was chiefly lipomatous, with the additional factors of a low grade inflammatory infiltration in certain parts and distinctly hemangiomatous structure in others.

LESTER HOLLANDER, M.D., Secretary.

NEW YORK DERMATOLOGICAL SOCIETY

Regular Meeting, Feb. 24, 1925

HANS JORGEN SCHWARTZ, M.D., *President*

URTICARIA PIGMENTOSA. Presented by DR. HOWARD FOX.

G. B., a boy, aged 3½ years, born of American parents, had suffered for three years from the eruption. It was present on the trunks and extremities, and consisted of relatively few light brownish macules averaging one-quarter inch (0.6 cm.) in diameter. According to the mother's statement, there had never been any change in the eruption since its onset, none of the lesions having disappeared so far as she was aware. There were no subjective symptoms. On friction, the lesions became somewhat reddened but not appreciably elevated. The patient had recently suffered from both scarlatina and varicella. He was a well nourished, apparently normal child. Histologic examination by Dr. J. Frank Fraser showed the presence of mast cells.

DISCUSSION

DR. HIGHMAN: Referring to the question of the mast cells, unless one has a good quality of polychrome methylene blue these cells do not dye very well. Also, as pointed out by Dr. Hartzell at the meeting of the American Dermatological Association, they are not always present in all the lesions. Dr. Hartzell in several cases took the trouble to make excisions of various lesions from the same patient, and some of them showed mast cells while others did not, those in the involution stage being the least likely to show them. Whether or not the mast cells are found depends on these circumstances. There is no question as to the correctness of the diagnosis.

DR. HOWARD FOX: I regret that a microscope was not available to demonstrate the granules in the mast cells which Dr. Fraser succeeded in staining.

MAJOCCHI'S DISEASE. Presented by DR. WISE for DR. FORDYCE.

H. O., aged 38, born in Barbados, W. I., and first seen at the Vanderbilt Clinic on Feb. 19, 1925, had lesions on the abdomen, upper part of the thigh, flanks, buttocks and upper extremities. The eruption consisted of telangiectatic arterioles arranged in various shapes, some circular and others irregular in outline. The size varied from that of a dime to that of a quarter and larger, and the lesions were brownish red. Other lesions resembled purpuric macules. One lesion in the right femoral region showed distinct atrophy. A section was taken for microscopic study, but this had not yet been reported on.

DISCUSSION

The diagnosis was accepted without dissent.

PROBABLE ARSENICAL LICHENOID ERUPTION; PIGMENTED ERUPTION DUE TO THE USE OF CALAMIN AND ZINC LOTION. Presented by DR. CLARK.

C. M., a girl, previously shown at the December meeting with the diagnosis of prurigo, aged 11 years, had suffered from prurigo since about the age of 1 year, no form of treatment giving much relief.

When first presented at the New York Skin and Cancer Hospital, lesions of prurigo were still present, but in addition the child presented a pigmented, lichenoid eruption of the face, body, arms and legs, and particularly of the back of the neck, with cleared areas of normal skin in and around the axillary region, bends of the elbows, buttocks and inner side of the thighs and around the knees. The similarity of this eruption to the eruption in the patient with the demonstrated arsenical, pigmented, lichenoid lesions (presented at the last meeting) led to the consideration of a similar diagnosis in this case, although it was impossible to obtain any history of the ingestion of arsenic in any form from the child or the parents. A urinalysis, however, showed an arsenical content which, while low, was exactly comparable to the amount of arsenic in the urine in the case alluded to when that patient was not receiving intravenous injections of thiosulphate.

An examination, made by Dr. Myers of the Metz Laboratory, of the calamin and zinc lotion the child had been using at varying intervals for a long time showed an unusual amount of arsenic in the lotion, which, though comparatively small in amount, might possibly be considered a source of arsenical absorption because of the extent of the area of practically the whole body, to which the calamin and zinc lotion had been generously applied.

During the past three weeks, the child had been given injections of 0.5 gm. of thiosulphate three times a week, in addition to the same amount by mouth three times a day — and improvement in the lichenoid, pigmented areas, especially on the body, was distinctly noticeable. During this treatment urine had been sent to Dr. Myers for an arsenical determination, but up to the time of presentation it had been impossible to get a report on these examinations. Should the urine show a marked increase in the arsenical output under treatment with the thiosulphate injections, as it did in the case of the man shown at the last meeting, it would seem that a long step had been taken toward proving this unusual looking eruption to be arsenical in character.

Dr. Clark said that a report would be submitted at the next meeting regarding these urinary findings. The case had been of particular interest because the eruptions of these two persons had been absolutely identical at times, and were entirely different in character from the eruption of any other disease of the skin with which he was familiar.

DISCUSSION

DR. WISE: In my opinion, the lesions shown by the child could be interpreted without the question of arsenic poisoning being a factor. She was an Italian, and persons of that race are often darkly pigmented; and the old prurigo from which she was suffering would be enough in itself to account for the pigmentation. I do not know whether or not there are any definite

symptoms of arsenical poisoning in the skin, but if the urine showed any considerable amount of arsenic it is natural to assume that it has some influence. The most puzzling feature is that the lesions are so sharply defined. All in all, it is difficult to interpret them as being due to the arsenic itself. It might be a mixture of prurigo and arsenical eruption.

DR. HIGHMAN: I agree with Dr. Wise in many of the points he has made, but if the pigmentation were due to the prurigo it should be of a less distinct brown and should be more of the grayish color characteristic of the pigmentation of prurigo. The color is more what one would expect to find in arsenical hyperpigmentation rather than that which comes from prurigo alone. Of all parts of the body, the face is least likely to be pigmented in prurigo. For this reason alone I should be inclined to the hypothesis that this pigmentation is entirely, or least to a high degree, due to arsenic. It is hard to see how from such a small amount of arsenic applied to the skin such marked pigmentation would result; nevertheless, it is known from Dr. Schamberg's experiments with mercury how much more absorption through the skin is possible than was formerly admitted. It might be that the child had been taking arsenic to a greater extent than had been supposed.

DR. BECHET: It is difficult to believe that such a small quantity of arsenic in the calamin lotion, even though applied for years, could cause the extensive pigmentation exhibited by this patient; however, little is known about the degree of drug absorption, either through the skin or by inhalation, and one cannot definitely state that the pigmentation in Dr. Clark's case is not due to the arsenic content in the calamin lotion. Some patients certainly seem to develop greater absorptive powers than others. I reported a severe case of hydrargyrism in a patient with psoriasis, from the application of *2* ounces of a *2.5* per cent. ammoniated mercury in a week.

DR. HOWARD FOX: There are several points of interest in the case. The sharply demarcated clear areas on the buttocks present an unusual picture. As to the condition being due to the arsenic in the lotion, I am skeptical as to whether the amount contained in any calamin and zinc lotion could cause such an eruption. I hardly agree with a suggestion that has been made that the condition resembles a congenital ichthyosiform eruption. The child has a severe pruritic eruption from head to foot, and ichthyosiform eruptions are not pruritic. As the patient is an Italian with dark skin, the prolonged scratching may have produced such a pigmentation. Every one has seen the rare cases of vagabond's disease in which prolonged severe scratching has resulted in pigmentation darker than an ordinary negro's skin.

DR. CLARK: The case interested us a great deal, in view of the findings in regard to the patient presented at the last meeting. The character of the lesions and their distribution, the pigmentation, lichenification, etc., are closely similar to the lesions shown by that patient, which were proved to be an arsenical eruption. The findings in the urine of this child before the injections of thiosulphate were practically the same as those of the patient presented at the last meeting, and a careful study of the reports in the two cases, with comparisons during injections of thiosulphate, may later prove the diagnosis of arsenical eruption. Dr. Myers has spoken strongly in regard to the danger of continuing the use of the calamin and zinc lotion which has been used at the hospital because, while the amount of arsenic is small, the lotion is often used over large areas of skin for periods of months or years, and I think it

possible for the amount of arsenic in the lotion to cause such a pigmentation, and that the lotion should be changed. During the last three weeks, since the child has been taking the thiosulphate injections every second day, the lichenoid lesions and the pigmentation have distinctly faded and paled. This has been noticed particularly along the marginated edges of the lesions—exactly as in the case of the patient presented at the last meeting; and as no other source of arsenic has been discovered than the use of the lotion, and in view of the work done by Dr. Myers and Dr. Rosen with Dr. Fordyce at the Vanderbilt clinic, the case seems to be one well worth working up along the line suggested, and the findings will be reported at the next meeting.

Dr. Wise: Is is possible that some of this arsenical poisoning may be due to inhalation from the calamin and zinc lotion, as in the case of mercury? That should be taken into consideration.

Bromoderma. Presented by Dr. Bechet.

M. S., a man, aged 26, born in Russia, came to Dr. Whitehouse's service for the relief of a severe eruption on the face and lower legs, which had been present for a month. For eight days prior to the eruption, he had been taking the following prescription.

	Gm. or C.c.
Sodium bromid	10.0
Potash bromid	
Ammonia bromid .....āā	8.0
Elixir of lactopeptin.....	20.0
Distilled water .....ad	60.0

Sig.: One teaspoonful, three times a day, after meals.

The lesions were numerous and mostly confined to the face and lower legs, where they formed plaques of the papillocondylomatous type.

Parapsoriasis in Patches. Presented by Dr. Howard Fox.

J. P. K., aged 52, a merchant seaman, born in the United States, had suffered from the eruption for seven years. It had occasioned no appreciable itching and had not been modified by treatment with various ointments. The lesions were present on the trunk and lower extremities and consisted of superficial, slightly scaly, round or irregular-shaped plaques varying in size from that of a dime to a half dollar. On palpatation, no infiltration could be felt. There were no evidences of scratch marks. The Wassermann test was positive, the history of syphilis being indefinite. Histologic examination by Dr. J. Frank Fraser revealed a very mild inflammatory reaction with small round cell infiltration.

Lupus Erythematosus Disseminatus. Presented by Dr. Wise for Dr. Fordyce.

M. L., aged 44, an agent of the Interborough Company, came to the Vanderbilt clinic on Feb. 19, 1925, presenting a widespread eruption of eight months' duration. The lesions were on both wrists, the finger-tips and the dorsum of the fingers. There were a few lesions on the vermilion border of the lower lip. The involvement of the face included both auricles and extended into the internal meatus. All the lesions were of a bright erythematous color and had adherent scales on them.

DISCUSSION

DR. WHITEHOUSE: It is an unusual case, but all of these conditions are very much alike, and I doubt that it is a discoid lupus disseminated. The prognosis of the case is not good. It would be interesting to search for a focus of origin. In my opinion, tuberculosis is only one of the causes of lupus erythematosus. It is possible that an investigation may reveal some toxic focus.

DR. WISE: Patients have been seen with the discoid lesions on the face for years and then on the body, but in my opinion this is a case of true disseminated lupus.

DR. HIGHMAN: After what Dr. Wise has said there can be no conclusion other than that this is a case of disseminated lupus erythematosus. All are familiar with the discoid type which after persisting for years becomes disseminated, and with the fact that the form which this patient shows, as well as the true disseminated variety, can become fixed, and that in such a case the prognosis is better than in the first variety. Then there is the type which remains disseminated and looks like a severe erythema multiforme and rapidly leads to death in the majority of instances. In this case there seems to be nothing conclusive to do diagnostically, but to watch the patient.

DR. BECHET: I do not agree with the opinion that lupus erythematosus disseminatus is necessarily fatal; some patients improve or even become well. I have in mind an extensive example of the disease which has been under observation more than a year and a half; the patient is a woman, aged 69, and the lesions had been present for three years. They were of the discoid type on the face. On the clavicular region was a collar of aggregated patches about 4 or 5 inches (10 or 12 cm.) wide and exactly similar in appearance to those in Dr. Wise's case. The forearms and hands were covered with lesions. The eruption was most extensive, yet a year and a half latter it had entirely disappeared, except two small lentil-like spots on the face.

DR. HOWARD FOX: It is a classical case of lupus erythematosus disseminatus, and I can not see any suggestion of the discoid type in this patient. It is recognized that in a small proportion of cases there is an association of the two types of lupus erythematosus, but that is not apparent in this case. It is difficult to describe the appearance of the so-called lupus erythematosus disseminatus to one who has never seen it. It is necessary to see the patient to become acquainted with the condition. While the ultimate prognosis is probably bad, I am not inclined to regard it as hopeless as do others who have spoken. I have a patient whom I have observed at intervals for five years, who has survived several attacks with severe constitutional symptoms. The symptom of greatest importance in the discoid variety is the sharp definition of the border of the patches. The usual sites of predilection are the face, scalp and ears, and, less frequently, the backs of the hands. As a rule, the lesions are more deeply seated than those of the disseminate type, and eventually show the presence of atrophy. In my opinion, the lesions in this case distinctly fade off into the surrounding skin.

DR. HIGHMAN: I agree with Dr. Fox that the demarcation of the lesions is a matter of opinion, but I should say that 50 per cent. of them are sharply demarcated.

DR. WISE: I believe the condition is a typical lupus erythematosus disseminatus.

Dr. Kingsbury: This case is a good example of the so-called type of disseminated lupus erythematosus. It is unfortunate that these cases are ever referred to as lupus erythematosus, the condition being so distinct from the discoid type. Dr. Fox, in his enumeration of the features of the discoid type, failed to mention the chronicity; the condition must exist a long time to become atrophic. This patient had an acute eruption, the lesions fading off into the normal skin without any sharp line.

Dr. Clark: My first impression was that which Dr. Highman expressed, that it was probably a discoid disseminated lupus; but when I examined the hands and saw the erythema multiforme-like lesions on the palms and fingers, I changed my mind about the character of the eruption. I have never seen that type of eruption in the real discoid type of lupus erythematosus disseminatus. I have followed three patients with this condition until their death: one died of tuberculous peritonitis, another of general glandular tuberculosis and the third of septic endocarditis. I have always regarded lupus erythematosus disseminatus as a practically fatal type of acute eruption, and I think that Dr. Kingsbury was right in saying that it should not be considered as a lupus erythematosus.

Dr. Wise: I shall report at the next meeting on the general findings in the patient.

Lichen Planus on the Soles and Palms. Presented by Dr. Wise for Dr. Fordyce.

L. L., a laborer, aged 35, first seen on February 18 at the Vanderbilt clinic, presented a well marked eruption consisting of numerous typical, violaceous lichenified pinhead to larger sized papules on the trunk and extremities, mostly on the flexor surfaces. The palms and soles presented scaly infiltrated lichenoid patches, as well as the dorsum of the hands.

DISCUSSION

Dr. Whitehouse: I agree with the diagnosis. The lesions on the palms have flattened out under the use of some remedy. Everywhere else the lesions are typical of lichen planus.

Dr. Bechet: It would be impossible for me to make a diagnosis of lichen planus from an inspection of the palms alone, but the man has typical lichen planus lesions on the forearms, and there is no reason to doubt that the lesions have extended to the palms.

Dr. Howard Fox: The interesting feature in the case is the palmar eruption, the lesions here being very much like those seen in pityriasis rubra pilaris. As the rest of the eruption is plainly lichen planus, the palmar lesions are without doubt part of the same disease.

Dr. Clark: I agree with Dr. Fox. Another interesting feature is the typical eruption of the mucous membrane of both cheeks. Dr. Fox has shown two or three cases of lichen planus of the mucous membrane, and in this case there are typical lesions on the mucous membrane as well as on other parts of the body.

Dr. Wise: The palmar lesions appeared at the same time as the others but have somewhat flattened down owing to a plaster which has been used. It is all one condition of lichen planus.

Regular Meeting, March 24, 1925

HANS JORGEN SCHWARTZ, M.D., *President*

SYPHILIS OR TUBERCULOSIS (?) OF THE NOSE. Presented by DR. WISE for DR. FORDYCE.

Mrs. L. M., aged 34, married, who had had two healthy children and no miscarriages, whose Wassermann test, as that of her husband, was negative, fifteen months before presentation, while pregnant, noticed a small red nodule near the tip of the nose, which failed to heal under the use of ordinary remedies. From this point the inflammation spread to the nares and upward toward the bridge of the nose, until it involved the entire lower part of the nose and both nares. There were also two isolated papules on the upper lip. The lesion was symmetrical, without sharp borders, highly inflamed, somewhat scaly and soft to the touch. There were no subjective symptoms. Lupus erythematosus was excluded clinically.

DISCUSSION

DR. KINGSBURY: The fact that the patient had a negative reaction points to lupus vulgaris, although the clinical appearance is more that of syphilis.

DR. FRASER: I agree with Dr. Kingsbury.

DR. HOWARD FOX: My guess based on the clinical appearance is lupus rather than syphilis. The fact that the lesions are symmetrical on both sides of the nose is in favor of lupus, as the late lesions of syphilis tend to be asymmetrical.

DR. HIGHMAN: I have seen four cases of tertiary syphilis on the tip of the nose, and the late Dr. Johnston told me about another. Dr. Johnston used to tell how easy it was to mistake syphilis on this site for lupus, and so lose valuable time in treatment. In all the cases that I have referred to, the Wassermann test was positive. While the negative Wassermann test in this case strongly favored lupus, nevertheless clinically the lesion suggested only syphilis, and that is corroborated by the two papules on the upper lip near the nares, which look like syphilitic papules. Further, the apple-jelly nodules are absent, so that for all these reasons and despite the negative Wassermann test I feel that the condition is syphilis.

DR. WILLIAMS: It impresses me as lupus rather than syphilis; the process is superficial, the nodules are soft, the process is more active at the center. Tertiary syphilis at this stage is more likely to present the greatest activity at the periphery rather than in the middle.

DR. SCHWARTZ: It is difficult to make a clinical diagnosis, but I am inclined toward Dr. Highman's views and I believe the condition is syphilis.

DR. WISE: I will report further on the case at the next meeting.

MULTIPLE BENIGN CYSTIC EPITHELIOMA. Presented by DR. WISE for DR. FORDYCE.

E. R., a girl, aged 8 years, had an eruption on the face which was of nine months' duration. The lesions were situated on the upper and lower eyelids, the skin adjacent to the nose and on the nasolabial folds. They consisted of many closely grouped, tiny slightly reddened papular excrescences, barely palpable and imperceptibly elevated above the surrounding normal skin. Subjective symptoms were lacking. The distribution of the lesions were almost exactly

like that seen in benign cystic epithelioma and tricho-epithelioma, but the possibility of early adenoma sebaceum could not be excluded clinically. The child's mentality was excellent. A biopsy was not obtainable.

DISCUSSION

DR. WILLIAMS: I believe the condition is multiple benign cystic epithelioma rather than adenoma sebaceum, for that favors the lower part of the face rather than the part near the eye; also, in the cases I have seen the lesions are more prominent. In this case they are almost flat and scarcely palpable.

DR. HIGHMAN: The situation favors the diagnosis of multiple benign cystic epithelioma, but the fineness of the lesions, the number and the telangiectasia point to adenoma sebaceum. The matter would have to be decided by the microscope.

DR. MACKEE: I am inclined to favor the diagnosis of adenoma sebaceum, because the eruption occurred early in life, in a girl, and because the lesions are very small, closely crowded and some slightly telangiectatic; also because of the location of the lesions.

DR. HOWARD FOX: I favor the diagnosis of benign cystic epithelioma on account of the shiny vesicle-like appearance of some of the lesions.

DR. KINGSBURY: I think the patient would have to be under observation for some time before either diagnosis could be accepted. I do not agree with either.

DR. TRIMBLE: My first thought was that the condition was adenoma sebaceum. I do not remember ever having seen a case of multiple cystic epithelioma in a child—all have been in grown persons. The child perhaps has not had the condition long enough to produce telangiectasia; the fact that she has had the lesions for only a year and that she is 8 years old are against adenoma sebaceum, but I would consider it that tentatively, until it is proved otherwise.

DR. HIGHMAN: Granuloma nasi rubrum should not be excluded without consideration.

DR. CLARK: I am inclined to agree with the diagnosis of adenoma sebaceum, but I feel that one would have to wait for a biopsy before deciding definitely.

DR. WISE: I favor the diagnosis of benign cystic epithelioma, for the reasons given by Dr. Williams.

NEVUS FLAMMEUS TREATED WITH RADIUM. Presented by DR. WISE for DR. FORDYCE.

A girl, aged 7 years, had a port-wine mark which occupied the skin of the left part of the forehead, eyelids, cheek and nose. The lesion had been treated with radium at one of the local hospitals in which radium is being extensively used for the treatment of malignant growths. The last radium treatment was given three years before. In different areas of the nose, cheek and forehead were scattered patches of atrophy and scar tissue, mottled with numerous well-defined telangiectases due to the radium treatment. Unaffected remains of the nevus flammeus were still visible on the forehead and the cheek. On the upper eyelid and on the cheek were two small keratoses.

DISCUSSION

DR MACKEE: Such treatment should be condemned. Port-wine marks can be removed with radium only by administering doses sufficiently large to effect

a severe reaction. In such instances a harmless cosmetic defect is replaced by dangerous "radium skin," and even so, the port-wine mark is usually only partly removed. In the case of the patient under discussion, there still remains a considerable port-wine mark, and there are depigmentation, atrophy, and telangiectasia due to the radium treatment. Also there is a beginning keratosis and many radium freckles. In years to come, the patient may develop malignant epithelioma. In addition to all this, the cosmestic result is not satisfactory.

DR. WILLIAMS: It is a good example of the abuse of radium. The mother said that there was a crust with matter coming away from it for six or eight weeks after the treatment. I agree with Dr. MacKee that these are not proper cases for radium treatment. It replaces a minor condition with a serious one.

SYPHILIS OR MULTIPLE BENIGN MILIARY LUPOID. Presented by DR. WISE for DR. FORDYCE.

Mrs. E. M., a mulatto, presented lesions which had existed for eight months. They were located on both upper arms, on the left breast, on the outer aspect of the right forearm and on the outer side of the left forearm above the elbow. They consisted of small groups of well-defined reddish-brown nodules, slightly elevated and of soft consistency. There were also a few scattered single nodules, some of which were undergoing spontaneous evolution.

NOTE.—Subsequently a Wassermann test proved four plus. The histologic examination will be reported at the following meeting of the Society.

DISCUSSION

DR. WILLIAMS: I believe the condition is sarcoid, not syphilis. If it were syphilis, it would be tertiary, late, and the syphilid would not be scattered all over the body. This girl has a single spot on the inner aspect of the arm and has very small groups on the breast, etc. There is a pigmented stain where the lesions have been absorbed. One group of three or four in which there are still a few nodules show a brownish stain where the lesions have disappeared, and a little atrophy. For these reasons I believe it is scarcoid and not syphilis.

DR. BECHET: I believe the lesions are Boeck's sarcoid. The appearance of the lesions in this particular patient show the close relationship between sarcoid and the tuberculids.

DR. HIGHMAN: I do not think one can be sure whether the condition is syphilis or sarcoid, particularly with reference to the lesions on the arm; but I have not seen sarcoid grouped like this before, neither have I seen it fade with atrophic scars such as are seen on the left breast. In my opinion, the grouping and the scarring strongly suggest syphilis. There are not a great many groups of lesions. I seem to recall a great many cases of tertiary syphilis with as many groups as this girl shows, and therefore I do not think it can be ruled out entirely for the reasons mentioned by Dr. Williams. The individual lesions look more like sarcoid than syphilis, and the case is probably sarcoid of Boeck.

DR. WISE: I am in favor of sarcoid for the clinical diagnosis, but I shall report on the case at the next meeting.

MOLLUSCOM CONTAGIOSUM SUCCESSFULLY TREATED BY THE ROENTGEN RAY. Presented by DR. HOWARD FOX.

R. C., a girl, aged 7, born in the United States, of Italian parents, was presented to show the favorable effect of roentgen-ray therapy. She was first

seen in May, 1924, presenting nine typical molluscum lesions of various sizes on the back of the right hand. There were also a few scattered lesions elsewhere. The eruption had been present for four or five months. The lesions on the back of the hand were treated by the roentgen rays at weekly intervals. The first treatment consisted of one half "skin unit," and the others of one quarter skin unit (unfiltered). A few days after the last irradiation the eruption on the hand had entirely disappeared and had not returned at the end of ten months. A lesion behind the ear and one on the leg had been treated by other methods. A large lesion on the cutaneous surface of the lower lip had not been treated, and had remained unchanged until the previous week, when it was excised for histologic study. A photograph of the hand was presented, showing the appearance of the eruption before the roentgen ray was applied.

DISCUSSION

DR. HIGHMAN: It is a valuable point to have brought to our attention, for in an extensive case one cannot conveniently open about two hundred molluscum lesions.

DR. BECHET: I agree with Dr. Highman that it may be a useful procedure in a case in which there are a large number of lesions, but when they are discrete and comparatively few in number, it is better to perforate the lesions with a toothpick soaked with phenol, or simply to curet them.

DR. HOWARD FOX: The roentgen ray was used only experimentally to determine whether I could duplicate the results obtained in a case presented a year ago. In that case the roentgenotherapy seemed a logical procedure, for the man had 150 lesions in one locality, whereas this girl had only a few. That the roentgen ray caused the result was apparently shown by the fact that a lesion on the chin which had not been irradiated had remained for a year. It had recently been excised for histologic examination. I was told by Dr. MacKee that the case presented last year was the first of the kind in which the success of the roentgen ray in molluscum had been recorded.

PEMPHIGUS CONFINED TO THE MOUTH FOR SEVEN MONTHS. Presented by DR. HOWARD FOX.

S. R., aged 43, a Russian Jewess, married, who had lived in the United States for the past ten years, had suffered for the past seven months from soreness and more recently from bullous lesions confined to the mucous membrane of the mouth. A tentative diagnosis of pemphigus was made. This was confirmed by the bullous lesions on the skin which had appeared during the last week. The family history was negative. She was the mother of three healthy children. The first symptoms consisted of a tickling sensation in the throat, followed by coughing up a half cup of blood. She continued to complain of pain in the throat. About four months before presentation she noticed sores in the mouth and began to suffer from hoarseness and dyspnea. One month ago, dysphagia became pronounced. During the past six months she had lost 40 pounds (18.1 kg.) in weight. Examination revealed the presence of numerous red, tender, superficial ulcerations of the mucous membrane of the mouth, tongue and pharynx. There were also half a dozen vesicles and bullae scattered over the cutaneous surface. About the umbilicus there was one flaccid bulla the size of a silver quarter. There was a slight enlargement of the lateral cervical glands. The tonsils were hypertrophied, and the teeth had previously all been removed. Stains for Vincent's angina had been negative. On various

occasions, the urine showed the presence of albumin, but no other abnormal ingredients. A roentgenogram of the chest showed no evidence of tuberculosis. The blood count was within normal limits; the blood chemistry showed: urea nitrogen, 10; creatinin, 2.5; uric acid, 4; sugar, 156 mg. per hundred cubic centimeters of blood. The carbon dioxid combining power was 59.5. In spite of her difficulty in eating and loss of weight, the patient was in good general condition.

DISCUSSION

DRS. KINGSBURY, MACKEE and BECHET agreed with the diagnosis.

DR. WILLIAMS: There is a type of pemphigoid eruption with erythematous lesions following vaccination after from six weeks to three months. Twenty or thirty such cases have been reported in this country. At Burlington a year ago I saw a child with this eruption who was treated with large doses of arsenic and quinin, and the eruption disappeared entirely. When I saw the child again it was free from all bullous lesions, but it had typical arsenical pigmentation all over the body.

If any of the members of this society see any cases of pemphigoid eruptions following vaccination, I shall be glad if they will let me know about them.

DR. HIGHMAN: Is it not a form of varioloid?

DR. WILLIAMS: No; it is a disease sui generis, taking its own course. Howe has reported a series of cases from Boston, and more recently cases have been reported by Bowen, Mook and Davis. The majority of the patients recovered.

DR. HOWARD FOX: I am gratified that all have agreed with the diagnosis of pemphigus. The case is almost similar to one that Dr. Bechet showed with lesions existing in the mouth for a considerable time before the appearance of the cutaneous eruption. Regarding Dr. Williams' reference to pemphigoid lesions following vaccination, I recall that this subject was discussed at the meeting of the American Dermatological Association in Ann Arbor in 1923.

DISSEMINATED FOLLICULAR LUPUS VULGARIS OF TILBURY FOX; ACNE AGMINATA TYPE. Presented by DR. BECHET.

C. R., a man, aged 29, born in Russia, came to Dr. Whitehouse's service at the Skin and Cancer Hospital saying that the eruption had been present for four months. It was confined entirely to the face, and consisted of firm, yellowish to copper-colored nodules, somewhat grouped in distribution, translucent and indolent in character. Some of the nodules were slightly scaly; others were necrotic in the center. There was no history of drug ingestion. The Wassermann reaction was negative. The report from the pathologist stated that there were nests of endothelial cells throughout the corium, some of which contained giant cells in the center. The pegs were stretched out so that only a few remained. There was marked basophilic degeneration in the upper corium. In places, the tubercles extended up under the epidermis.

DISCUSSION

DR. TRIMBLE: I believe that it is a case of acnitis, which is synonymous with acne agminata. Barthelémy described acnitis, which is the same as a papulonecrotic tuberculid, and that would be my own clinical diagnosis in this case. The histologic report would not negative that, for papulonecrotic tuberculid gives a tuberculous structure histologically. The pathologic report sounded a little as if it might be tuberculous, although I feel pretty certain that the case is a papulonecrotic tuberculid of the type acnitis.

DR. WISE: I agree with the diagnosis of lupus follicularis disseminatus facei.

DR. TRIMBLE: There is disagreement as to what the condition is, but accord as to the various synonyms. The duration of this condition seems to favor the diagnosis of acnitis rather than the other condition.

DR. HOWARD FOX: I agree with Dr. Wise that it is a case of disseminated lupus vulgaris. I should expect to find a tuberculous structure histologically. The case is almost similar to the ones described by Dr. Wise some time ago and to others that I have had occasion to see.

DR. HIGHMAN: There is a certain amount of confusion on account of the difference of definition. I agree with Dr. Wise in every respect regarding this particular case. One of the reasons for confusion is that the histologic picture as presented by Dr. Bechet is a little vague, endothelial cells being mentioned but epithelioid cells being meant. The conclusion remains that we are dealing with a straight tuberculous condition. The only other condition that would give this picture might be follicular syphilis, and the case is not syphilis; so, on the prima facie evidence, it is tuberculosis of the skin, and of the form mentioned by Dr. Wise.

DR. BECHET: The duration of the lesions is only four months, which is a rapid development for lupus; yet, in my opinion, the deep firm nodules, the grouping, the coppery color with yellowish, somewhat translucent, centers, and their general indolent appearance strongly resemble the lesions described by Tilbury Fox as disseminated lupus vulgaris or acne agminata, the term used synonymously by Stelwagon in the 1921 edition of his textbook. Accompanying Stelwagon's article was a picture of a patient with similar lesions, whose case was reported by Ketron. It is perhaps unwise to use the term acne agminata in describing this condition, yet Stelwagon, while classifying acne agminata under the general heading of acne varioliformis, termed it synonymous with disseminate follicular lupus vulgaris of Tilbury Fox, and described symptoms exactly corresponding with those of the case under discussion. Great and rather needless confusion existed in the nomenclature. In my opinion, the case under discussion is one of lupus vulgaris, and not acnitis, folliclis or acne necrotica. The term acne should be confined entirely to sebaceous gland disease, and should not be used to describe either tuberculosis of the skin or the tuberculids.

DR. MACKEE: The confusion relative to the clinical differentiation between acnitis and miliary lupus is caused in part by the fact that the pathologic histology in some cases shows a tuberculous structure while in others it does not. It seems possible that these pathologic differences may be due to faulty clinical diagnosis. Without a tuberculous structure, we are dealing with papulonecrotic tuberculid; in the presence of tuberculous pathology, we are dealing with tuberculosis. The clinical differentiation is difficult at times.

DR. HIGHMAN: My impression concerning the condition is vague because of the confusion in the literature. When Pollitzer first described the condition, he thought it was simply a chronic inflammatory process leading to necrotic destruction of the follicle. Then Barthélemy and Török, after more detailed study, described the facial lesions as acnitis and the others as folliclis. Then other investigators reported cases in which the lesions were tuberculous in structure, and called the entire group papulonecrotic tuberculids because of the findings in these relatively few cases which seemed tuberculous. Gradually this entire group was considered to be related to tuberculosis. Then the pendulum swung, and now we consider those that have the structure of tuberculosis as

tuberculous; and the others, that do not look tuberculous, we again regard in the original sense of Pollitzer. He would maintain that these are not tuberculids. If that is true, it brings us back to our starting point.

ALOPECIA TOTALIS. Presented by DR. HOWARD FOX.

W. S., a native American, formerly a mechanic, whose family history was negative, and who after hard service in the war, where he was severely gassed, returned to the United States in May, 1919, shortly afterward suffered from an extensive and severe eruption of "blisters filled with yellowish fluid of putrid odor." It involved the mucous membranes of the mouth as well as the skin, and lasted for three months. In the fall of 1919, he suffered from a total alopecia of the scalp, accompanied by rather severe gastro-intestinal symptoms. He was told that he had an ulcer of the stomach. At the end of about twenty months, the hair had entirely returned. In the summer of 1923, he again suffered from a total alopecia of the scalp and, in addition, an alopecia of the eyebrows, axillary, pubic and downy hairs of the body. This condition had persisted unchanged up to the present. At the time of the outbreak of this attack he was told by a physician that he had "thyroid poisoning," and a portion of the thyroid gland was excised. He was "nervous" at that time, and his pulse was very rapid. In February, 1921, there was a second, and in the fall of 1923, a third eruption similar to the first one, each lasting about three months.

Examination showed in addition to his universal alopecia, a linear scar in the region of the right lobe of the thyroid gland. His pulse rate was 120, there was a slight exophthalmos and a marked tremor of the hands. Physical examination was otherwise negative. His appearance was that of a normal person in good general health. The Wassermann test (blood) was negative, as was also the urine examination. The blood count showed no abnormality.

RECKLINGHAUSEN'S DISEASE ASSOCIATED WITH A LARGE PENDULOUS TUMOR OF THE ABDOMEN. Presented by DR. WISE for DR. FORDYCE.

I. E., an Italian, aged 30, gave a negative family history. His mentality appeared to be normal. He presented the typical picture of advanced fibroma molluscum, with many hundred nodules and pigmented spots scattered all over the body, together with a walnut-sized tumor on the left cheek. On the right lower abdominal area was a large soft pendulous growth, the skin over it exhibiting typical circumscribed soft cutaneous growths and nevus-like formations, together with many freckle-like lesions. This tumor was entirely subcutaneous.

EXTENSIVE PHENOLPHTHALEIN ERUPTION. Presented by DR. WISE.

M. S., aged 38, a private patient, had had the eruption for nine years more or less constantly, with periods of remission and exacerbation; the skin had never been entirely free from it during all this period. The lesion consisted of widespread plaques of bright erythema associated with moderate scaling, situated on the entire inner aspects of both extremities, on the chest, abdomen, anterior surfaces, of the thighs, on the buttocks, and over the sacrum. There were a few vesicular lesions on the hands. The mucosae and genital organs were unaffected. The plaques were characterized by a peculiar lacework-like and marmorated mottling in the center portions, in which the skin appeared to be free from inflammatory signs. The patient complained of considerable itching and burning. The eruption always "flared up" after the ingestion of phenolphthalein cathartics.

MULTIPLE MELANO-SARCOMA OF THE FOOT. Presented by DR. WISE for DR. FORDYCE.

M. McD., a man, aged 58, had had the lesions on the outer surface of the left foot for nine months. The area presented a group of six nodular lesions, some of which had undergone superficial ulceration owing to the constant application of tincture of iodin. The untreated lesions were about one-eighth inch (0.3 cm.) in diameter, sharply defined, papular, distinctly reddish brown. The lesions were limited to an area on the outer surface of the foot of about 6 inches (15.2 cm.) in diameter. Subjective symptoms were lacking.

NOTE.—Subsequent biopsy revealed the vascular type of Kaposi's sarcoma.

Fig. 1.—Phenolphthalein eruption on buttock and on thigh.

DISCUSSION

DR. WILLIAMS: I believe the condition is sarcoma, not the hemorrhagic type, but the genuine sarcoma that is likely to be fatal. The question of treatment is important, and the best method seems to be a large dose of the roentgen ray. The patient will probably develop metastasis, and roentgen-ray treatment for the relief of symptoms is best.

DR. BECHET: I agree with Dr. Williams that the condition is sarcoma, but not of the hemorrhagic type of Kaposi.

DR. MACKEE: Metastasis either has or has not occurred. If it has occurred, the disease has been disseminated by the blood stream and is beyond the reach of any therapeutic measure. If it has not occurred, there is a chance that a clinical cure may be obtained with the roentgen ray or radium—agents that never precipitate metastasis, which surgical methods may.

DR. TRIMBLE: I agree with the diagnosis of sarcoma.

DR. WISE: I agree that roentgenotherapy is probably the best treatment.

XANTHOMA TUBEROSUM MULTIPLEX. Presented by DR. BECHET.

A man, aged 35, born in the United States, had lesions which had been present for six months when he came to Dr. Whitehouse's service for treatment. There was a large number of yellow tuberose lobulated tumors around the elbows; at the phalangeal articulations there were a large number of lesions, lentil to grape-sized, covering the circumference of the fingers, and giving the

Fig. 2.—Phenolphthalein eruption on inner surface of thigh.

hands a most grotesque appearance; and there were several large lesions on the buttocks. All of the lesions were of the characteristic yellow color. The Wassermann reaction was negative. Urinalysis was also negative. A qualitative analysis of the blood was being made, and would be reported on at a future meeting.

ERYTHEMA MULTIFORME AND MACULOPAPULAR SYPHILID. Presented by DR. BECHET.

J. D., aged *27*, born in Sweden, came to Dr. Whitehouse's clinic saying that two years previously he had had syphilis, the symptoms of which had subsided after a few weeks of desultory treatment. For several weeks previous to his appearance at the clinic, he had noticed a papular eruption on the trunk. At

that time, he had a marked dermographism and violaceous, slightly raised, large-sized spots on the trunk, which itched and burned. The Wassermann reaction was doubtful. Under treatment for erythema multiforme, the eruption greatly subsided. Another Wassermann reaction a few weeks later was two plus. About two weeks before presentation, an annular papular eruption appeared on the scalp and face. A third Wassermann test proved to be four plus, and at the time of presentation the patient showed the annular papular eruption of syphilis on the face, scalp and trunk and also the dermographism and violaceous spots of erythema toxicum.

DISCUSSION

DR. TRIMBLE: I am inclined to agree clinically with the diagnosis of syphilis, but I would rather call the other condition a toxic erythema.

DR. WISE: I agree with Dr. Trimble, but I am inclined to regard the condition not as a maculopapular syphilis but as a late secondary syphilid with annular lesions—not a tertiary syphilis.

DR. TRIMBLE: I consider the entire condition on the scalp as one large tertiary syphilitic lesion.

DR. HOWARD FOX: This condition would properly be classed under the so-called late secondary syphilid. It was localized on the face and scalp but symmetrically situated and was of a type that would disappear without scarring.

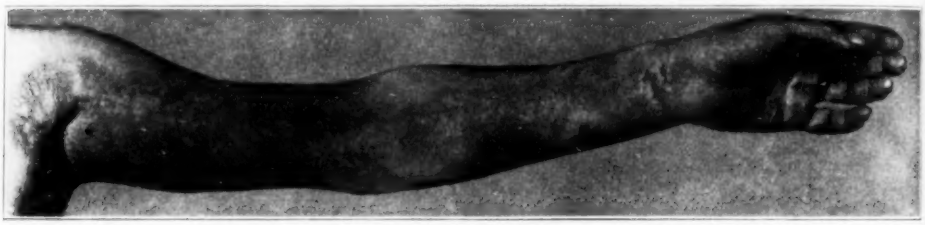

Fig. 3.—Phenolphthalein eruption on arm.

DR. HIGHMAN: I agree with what has been said, but I think one should be more careful in using the term "erythema multiforme." The way the term is used classically is the way it ought to be used, and therefore I am glad to hear Dr. Trimble call this a toxic erythema, which it probably is.

DR. WILLIAMS: I agree with Dr. Highman. I would also emphasize what has been said about annular syphilid being unusual in a white man; there are distinct rings in this case.

DR. BECHET: I accept the suggestion of toxic erythema. That is what I had in mind when I designated the case as one of erythema multiforme. I was under the impression that there was little relative difference between the two; they are both due to a toxemia of some kind. The interesting feature in the case lies in the fact that the Wassermann reaction became four plus at the same time that the specific eruption appeared. The man has received insufficient treatment, which would account for the late appearance of the rash.

LUPUS VULGARIS AND TUBERCULOUS ADENITIS OF THE NECK. Presented by DR. WISE for DR. FORDYCE.

B. C., a full-blooded negro, aged 49, presented a roughly circular lesion on the right side of the face below and behind the ear, about 2 inches (5 cm.)

in diameter. The patch was composed of distinct nodular elevations, some of them closely grouped, others isolated, soft to the touch, and considerably darker than the surrounding skin. The center of the plaque presented an area of scar tissue. Beneath this plaque and also 2 inches anterior to it, on the ramus of the lower jaw, were several hard nodules about the size of hazelnuts and freely movable in the skin overlying them.

DISCUSSION

DR. CLARK: I agree with the diagnosis of lupus vulgaris. It seems to be a typical case, especially the lesions behind the ear.

HISTOLOGIC REPORT OF LICHEN PLANUS CONFINED TO THE MOUTH. Presented by DR. HOWARD FOX.

A. B., a man, aged 41, had suffered for a year and a half from a few scattered lesions of the mouth presenting the clinical appearance of lichen planus. He had previously been shown before the Society by Dr. Williams. On consulting the presentor recently, a small piece of tissue was excised from the buccal mucosa and a section made by Dr. J. Frank Fraser, who reported the absence of the histologic picture of lichen planus. The section was demonstrated to the Society.

DISCUSSION

DR. WILLIAMS: The picture shown in the slide does not look like lichen planus. The man is a heavy smoker. Clinally, the lesions look more like lichen than leukoplakia.

PRURIGO AND ARSENICAL PIGMENTATION. Dr. Clark.

Dr. Clark reported on the case of the 13 year old girl shown at the December meeting with prurigo and again at the February meeting with the diagnosis of arsenical pigmentation probably due to calamin and zinc lotion. The child was put on a course of injections of thiosulphate every other day and the same by mouth three times a day, and the output of arsenic had been increased more than ten times, which would seem to prove that the peculiar eruption was arsenical in character. During the past five weeks the child had made marked improvement in general symptoms and the appearance of the lesions; the lichenoid lesions had flattened down, and the pigmentation had lightened perceptibly.

DERMATITIS VENENATA (Primrose). DR. HIGHMAN.

Dr. Highman told of a woman with a dermatitis venenata, seen ten days previously, who gave a history that five days prior to that an oculist had instilled scopolamin in her eyes and she developed the dermatitis. She went to another physician who told her that the eruption came from the scopolamin. Dr. Highman inquired whether she had any primroses, and she replied that she had not but that a short time before she had sat down in some *Rhus*. The eruption did not respond well to treatment; it improved, but flared up again. Three days before this meeting a friend calling on her directed attention to a primrose growing in the living room. The plant was disposed of, and now the patient is practically well.

Dermatitis (Rhus). Dr. MacKee.

Dr. MacKee requested comments on the causation of *Rhus* dermatitis by indirect contact. He had heard of many instances of persons contracting *Rhus* dermatitis while driving in a vehicle along a country road lined with a luxuriant growth of *Rhus toxicodendron*, but who had not touched the plant. He had never himself seen a case that was definitely caused in this manner. He wondered whether the virus might be carried by flies and other insects. Recently he had encountered a woman who had developed a severe *Rhus* dermatitis after having been exposed to smoke from burning *Rhus toxicodendron*. She had not touched the plant. This patient had always been able to touch the plant with impunity, but contact with the smoke for some time, during which it was inhaled, appeared to sensitize or break down the immunity.

Dr. Williams said that he had had indirect contact through a shirt sleeve. He had had the eruption once after removing the ivy from an apple tree, and a month later he had put on the same shirt, which had been washed in the meantime, and had had absolutely the same symptoms. McNair reports on the smoke in his book. If the smoke is filtered through hot glass wool it becomes innocuous; the resinous substance is carried by the fine particles of soot in the smoke. If the poison were a volatile oil, it would pass through the filter and the filtrate would still be active.

Granuloma Inguinale. Presented by Dr. Howard Fox.

S. J., aged 22, a full-blooded negro, a native of Charleston, S. C., had enjoyed good health until four years before presentation, when he developed "sores" in both inguinal regions. One year later he came to New York and was operated on in the City Hospital, the "sores" being successfully excised. He remained well until three months ago, when the disease reappeared. It had spread rapidly since then. He had suffered from gonorrhea seven years ago, but he gave no history of syphilis. He said, however, that his blood had showed a "four plus" reaction a year and a half ago. He had received twenty-four injections of arsphenamin during the past year and a half. Examination revealed an ulceration of the penis, extending around the sulcus for two thirds of its circumference. There were ulcerations on either side of the scrotum joining posteriorly to form a band extending over the perineum to within half an inch of the anus. The ulcerations were covered with red indolent granulations, had developed rolled borders, and had a slightly purulent discharge. Smears from excised tissue showed many extracellular and a few intracellular Donovan bodies. A photograph of the clinical appearance was presented, and the Donovan bodies were demonstrated microscopically.

Bromoderma. Dr. Bechet.

Dr. Bechet reported a marked improvement from the intravenous use of decinormal salt solution in the case of bromoderma shown at the previous meeting.

NEW YORK ACADEMY OF MEDICINE,

SECTION ON DERMATOLOGY AND SYPHILIS

Regular Meeting, March 3, 1925

DR. FRED WISE, *Chairman*

NEVUS LIPOMATODES. Presented by DR. BECHET.

S. G., a boy, aged 14, came to Dr. Whitehouse's service at the Skin and Cancer Hospital for the relief of a large mass on the ear, extending into the scalp, which had been present since birth. The lesion was soft and loose in texture; the surface was irregular and showed many closely packed folds and deep furrows. It covered most of the ear and extended into the scalp.

DISCUSSION

DR. ANDREWS: I believe it is a nevus, but nevus papillomatosus would be a better term for it.

DR. WISE: The roentgen rays would have no effect on this type of lesion.

LUPUS VULGARIS ERYTHEMATODES. Presented by DR. BECHET.

J. S., a man, aged 27, who came to Dr. Whitehouse's service, said that after an injury to the lachrymal duct he had been operated on for a fistula in the duct two years previously. Five weeks after the operation, a small red papule developed beneath the inner canthus of the left eye. More lesions made their appearance soon after, so that at the time of presentation he had a crusted, sharply outlined lesion over the nose and above the duct, with a somewhat nodular border and an atrophic, slightly scaly, center.

DISCUSSION

DR. GOODMAN: The conception given by Leloir to the condition named by him was that of a clinical lesion of the skin which on examination was indistinguishable from lupus erythematosus, but which on microscopic examination revealed the histologic structure of lupus vulgaris. Since in the case under discussion there had been typical apple jelly nodules, the diagnosis offered—lupus erythematodes—was not tenable.

DR. BECHET: The injury to the lachrymal duct was caused by a piece of shrapnel during the war, and shortly after that accident the condition developed. It is well known that tuberculosis frequently develops after an injury to the lachrymal duct, and this case seems to exemplify that fact.

MAJOCCHI'S DISEASE—PURPURA ANNULARIS TELANGIECTODES. Presented by DR. SCHEER.

H. A. (from Dr. Fordyce's service; previously presented at the New York Dermatological Society, Feb. 24, 1925) an elevator operator, aged 38, born in Barbadoes, W. I., was admitted to the clinic on Feb. 19, 1925. The duration of the lesions was three weeks; most of them were situated on the abdomen, the upper part of the thighs, flanks and buttocks and on the upper extremities. The eruption consisted of macules of various shapes, most irregular, some partially fused, brownish red and not scaly. All seemed to be purpuric, as the redness could not be pressed out of them. One lesion in the right femoral region showed distinct atrophy.

DISCUSSION

DR. ANDREWS: I agree with the diagnosis.

DR. CHARGIN: I agree with the diagnosis.

DR. PAROUNAGIAN: I am reluctant to accept the diagnosis as presented. It would be well to have the case worked up further before making a definite diagnosis. Some of the lesions resemble Hansen's disease.

DR. WISE: All examinations and tests were negative for leprosy. The diagnosis of Majocchi's disease was made unanimously by the members of the New York Dermatological Society.

DR. SCHEER: The patient was tested for sensation to heat, cold, etc., and found normal. Not only that, but the duration of the condition was only three weeks. That is probably the reason why atrophy has not yet developed.

MULTIPLE HEMORRHAGIC SARCOMA (KAPOSI). Presented by DR. MALONEY.

P. Z., a man, aged 67, born in Italy, a cement worker, presented multiple circinate and irregular-shaped, flat, and in some instances, rounded dark purplish nodules, varying in size from that of a small pea to lesions 2 inches by 1 (5 by 2.5 cm.) in area, situated on both extremities. Both hands and wrists showed similar nodules, and there was also one on the right hip. With the exception of the small toe of each foot, all the toes were thickened and ridged, the second toe of each foot, in particular, being twice the normal size. There was marked pigmentation on and around all the toes. The disease had existed for one year.

TUBERCULOSIS VERRUCOSA CUTIS. Presented by DR. MALONEY.

Edward J., aged 17, white, born in the United States, presented a warty excrescence on the posterior surface of the right foot, 2½ by ½ inches (6 by 1.2 cm.) wide, of one and a half year's duration. He had received four treatments of Kromayer light, at weekly intervals, and was now receiving roentgen ray treatment.

DISCUSSION

DR. ABRAMOWITZ: I agree with the diagnosis.

DR. BLOSSER: A patient was treated for a long time with the Kromayer light, without results; the lesion was then curetted; the actual cautery was used, and roentgenotherapy used for several months, but the condition recurred. The lesion was again curetted, tincture of iodin applied, and one and a quarter units of roentgen ray given. One month later all evidence of the disease had disappeared.

DR. WOLF: The method of treating tuberculosis verrucosa cutis has changed; heretofore it has been the custom to give massive doses for this condition; it is a granuloma, therefore the tendency now is to give smaller doses with high voltage roentgen ray. One can give one tenth of an erythema dose at a time until the patient has received the full erythema dose.

DR. TRAUB: I have treated a number of these patients with the roentgen rays and Alpine light combined, and they seemed to do better when the Alpine sun was given over the entire body and the roentgen rays locally. Filtered dosage, using 1 mm. aluminum as a filter, gives better results than using unfiltered rays. I give doses short of two units filtered, and I repeat in six weeks to two months.

DR. LEVIN: So far as cure is concerned, one of the most rapid results in tuberculosis verrucosa cutis I have seen was in a worker in the Department of Pathology at Cornell, treated by endotherapy. The condition cleared up in a few weeks.

DR. MALONEY: The treatment was changed from quartz to roentgenotherapy after a month, for the former apparently was not giving good results. I agree with Dr. Levin that probably endothermy gives the best results in these cases. I shall try that method on this patient.

DR. SCHEER: Referring to roentgenotherapy, these lesions, while serious, are not malignant and do not require a large amount of the roentgen rays. I recently saw a patient so treated who developed an epithelioma on the area irritated. I make this statement as a warning that when such patients are treated with the roentgen rays the amount used should not be excessive.

LUPUS ERYTHEMATOSUS DISSEMINATUS. Presented by DR. SCHEER.

M. L. (from the Vanderbilt Clinic), aged 41, an Interborough agent, admitted to the Clinic Feb. 19, 1925, presented lesions of eight months' duration, on the face, lips, forehead, neck, chest, back, arms and hands. These began eight months previously with a few pimples on the outer surface of the outer arm, and gradually spread until the involvement became diffuse. The lesions were of a bright erythematous color, with adherent scales. The lesions on the upper extremities, below the wrists, involving the finger tips were bright, shiny and smooth. There were a few lesions on the vermilion border of the lower lip, and the face involvement included both auricles.

DISCUSSION

DR. ROSTENBERG: I saw the patient two weeks before, and I am surprised at the improvement shown. The lesions were then of a severe type, and the improvement is so marked that I should like to know what has been done.

DR. SCHEER: The patient has been treated with simple calamine lotion. We have purposely avoided using anything that might prove irritating, for experience has shown that such remedies might cause a flare-up and spread the lesions.

KAPOSI'S SARCOMA OR MELANOMA? Presented by DR. SCHEER.

Mr. M. J. McD. (from the Vanderbilt Clinic), aged 58, unmarried, an investigator, presented half a dozen firm, violaceous-red nodules, from ⅛ to ¼ inch (0.3 to 0.6 cm.) in diameter, on the outer side of the left foot and ankle. The duration of the lesions was two months, and they were irritated by painting with tincture of iodin.

DISCUSSION

DR. ANDREWS: I disagree with the diagnosis of Kaposi's sarcoma. It may be a melanotic sarcoma, for the lesions are reddish in daylight. The condition developed during the last two months, and the patient has a large inguinal gland, the size of a robin's egg on the left side. There are no lesions of Kaposi's sarcoma on the hand or other foot.

DR. GILMOUR: I agree with the diagnosis of Kaposi's sarcoma.

DR. POLLITZER: I did not mean to speak about the case for I have not examined it closely, but I have some doubt about its being a case of Kaposi's sarcoma. I am under the impression that it is melanosarcoma, and what Dr. Andrews has said about the large inguinal gland corroborates this surmise. This is not merely an academic situation, but one of great importance from the point of view of prognosis, for if the case should prove to be melanosarcoma, nothing can be done.

DR. LEVIN: Referring to the resemblance of Kaposi's sarcoma to melanosarcoma, I observed a case at the Montefiore Hospital almost like this one,

which had been diagnosed as Kaposi's sarcoma. One of the lesions had been removed and reported to be melanosarcoma. The patient had had the lesions for at least two years, and should have died from metastasis if the condition had been melanosarcoma, because it had been incised repeatedly. I wish to emphasize the similarity that may exist in the clinical appearance of the two conditions. Even the general pathologist may report false interpretations.

DR. MCCAFFERTY: I believe the condition referred to as melanosarcoma, should be called melano carcinoma, because the cells found in this condition are nevus cells and bear no resemblance to the cells found in sarcoma.

DR. POLLITZER: About thirty years ago Unna showed that so-called melanosarcoma is derived from epithelial tissue and is properly a melanocarcinoma.

DR. SCHEER: A differential diagnosis is impossible without a biopsy.

LEUKEMIA CUTIS. Presented by DR. ABRAMOWITZ.

P. F. (from the Gouverneur Hospital Dispensary), a Russian Jew, aged 65, married, a pedler, who had been in this country for fourteen years, had had six children, all alive and well. His wife had had one still-birth. His family history was negative. His past history was negative, with the exception of pneumonia as a young man, from which he had made a good recovery. There was no venereal history. He had frequent urination at night. He claimed that he was in the usual state of health until four months before presentation, when hemorrhoids, which had until then annoyed him only by occasional loss of blood, began to swell and cause pain, and he noticed swellings on different parts of his body. There was no previous or present itching or other sensations. He presented raised, bluish-red, hard globular tumors, varying in size from that of a marble to that of a hen's egg, numerous subcutaneous hard olive-sized tumors, especially noticeable on the sides of the trunk, and definite enlargement of all regional lymph nodes. The liver and spleen were normal in size. Examination in general was negative. The blood smear showed white cells, 16,500, with 65 per cent. of equally distributed large and small lymphocytes. There were 33 per cent. of polymorphonuclears, with an occasional myelocyte and blastomycyte. A subcutaneous node was removed for examination. A biopsy of the raised skin lesion would be taken and reported on later. The Wassermann test and roentgen-ray examination of the chest had not yet been reported.

DISCUSSION

DR. CLARK: I agree with the diagnosis, but mycosis fungoides should also be considered. The patient denies itching. He has rather typical glands in the axillary and inguinal regions, but the diagnosis could probably be made only after a biopsy.

DR. LEVIN: I do not think the diagnosis of leukemia cutis has been proved: the blood picture is not typical of what one would expect. The diagnosis can be proved only by biopsy. I would suggest consideration of the diagnosis of lymphosarcoma and granuloma fungoides.

DR. ARBAMOWITZ: I see no resemblance to lymphosarcoma in the case. Lymphosarcoma, like Hodgkin's disease, was accompanied by enlarged cervical glands, other regional lymph nodes enlarging later, with the mediastinal and retroperitoneal glands participating rapidly, with the usual respiratory symptoms. The blood picture shows no more than a secondary anemia. None of these symptoms are present in the patient. On the contrary, he showed 16,000 white corpuscles with a lymphocytosis of 65 per cent., with numerous hemorrhagic cutaneous

tumors and many subcutaneous tumors, one of which when removed was hemorrhagic in its interior. Further blood counts would be taken and additional sections of the cutaneous tumors would be made and reported on later.

NOTE.—Microscopic examination of one of the excised subcutaneous nodules showed it to be made up of a pure lymphocytic infiltration. The Wassermann test was negative. Another blood count taken one week later was confirmatory.

ERYTHEMA MULTIFORME (Annular). Presented by DR. MALONEY.

E. N., aged 30, born in Italy, a waiter, presented multiple annular lesions of various sizes, averaging about 2 inches (5 cm.) in diameter, scattered over the trunk, front and back. Some of these had coalesced, forming gyrate lesions. The periphery was somewhat raised and red, and the skin within the rings was slightly rougher than the normal skin. There were some burning and itching. He had had three attacks of malaria during the past five months (October and December, 1924, and January, 1925), for which he had been given hypodermic injections of quinin and arsenic, receiving seventy injections in all. The skin eruption developed two weeks after the last injection, which was given about Jan. 10, 1925.

DISCUSSION

DR. CLARK: I agree with the diagnosis.

DR. WOLF: The case is interesting. The border of the lesions appear to be slightly infiltrated and scaly, and thought of the possibility of a disseminated tinea, or possibly something more serious. I tested sensation, and sensation to touch in the center of some of the lesions was absent and in others diminished; pain sense was present in some of the lesions and in others, slightly diminished. I believe that the case deserves further investigation to rule out a possible leprosy.

DR. ABRAMOWITZ: I think the eruption belongs to the group of erythema multiforme, but I would not place it in the annular group, since most of the lesions are figurate. I am inclined to call the condition erythema figuratum perstans. I do not think it is Hansen's disease, for if it were the lesions would be of much longer duration, of the maculo-anesthetic type, and not so infiltrated at the edges.

DR. PAROUNAGIAN: I do not agree with the diagnosis of erythema multiforme, as the lesions have remained too long—three months. I am not familiar with any kind of drug which might produce such an eruption. It suggests to me the possibility of being the macular type of Hansen's disease. I feel, however, that the case should be watched, and I hope that it may be presented again.

DR. LEVIN: It may be erythema perstans, due to injection of quinin. I recently observed a case of erythema perstans of a year's duration caused by quinin.

DR. MALONEY: An interesting feature of the case is the fact that the eruption occurred after seventy injections of quinin and arsenic given hypodermically. The eruption has been present only five weeks. The time is too short for it to be a case of Hansen's disease. As to the annular type, it may not be; the lesions are not all annular, but many are more gyrate. The interesting question is whether the eruption is due to the many injections of quinin and arsenic taken during a period of five months. The man is being treated for malaria, having had three attacks during the last five months.

A CASE FOR DIAGNOSIS. Presented by DR. THORNLEY.

J. S. (from the Vanderbilt Clinic), an Italian, aged 42, an oiler, presented a generalized rash which had been recurring for twenty-years—a brilliant pink

macular rash with some evidences of purpuric elements, and itchy. There was no history of drug taking. The patient was referred by Dr. Thornley from U. S. Marine Hospital No. 70.

DISCUSSION

Dr. Pollitzer: The fact that the history stated that these lesions cleared up entirely at times and then recurred at intervals during many years absolutely ruled out parapsoriasis, a diagnosis which I at one time considered. My clinical diagnosis would be mycosis fungoides. It is not necessary to refer to the well-known confusion existing between the early stages of mycosis fungoides and parapsoriasis. The original paper of Unna, Pollitzer and Santi was based on two cases, one of which proved subsequently to be mycosis fungoides, and that error so early in the history of the disease has been repeated many times. In the early stages of mycosis fungoides, the diagnosis can be made, however, by means of the microscope.

Dr. Abramowitz: I saw the patient once before, when the lesions were not so pronounced. The lesions now are more pink, a few showing a slight bluish tinge in their interior. There is also some infiltration at the edge of the lesions. I am inclined to think that this man has mycosis fungoides in the prefungoid stage. Frequent blood counts will be made in order to exclude a leukemia.

Dr. Bechet: I am inclined to make a diagnosis of early mycosis; the lesions do not have the color of parapsoriasis, and some of them are prone to the serpiginous configuration so often observed in mycosis; some of them also have a deeper violaceous color than in parapsoriasis. While it is true that the man has had the condition for about twenty years, this does not absolutely eliminate mycosis fungoides, as it is known that occasionally the early stages of mycosis last for many years before reaching the fungoid period.

Dr. Levin: I consider the case a prefungoid stage of mycosis fungoides. The chronicity, the itching and the elevated margins favor that rather than parapsoriasis.

Dr. Wise: I favor the diagnosis of mycosis fungoides in the erythematous phase of the disease.

Dr. Thornley: The patient came from the Hospital on Staten Island with a diagnosis of pityriasis rubra. I was not satisfied with that diagnosis, and therefore I sent the man to the Vanderbilt Clinic. I have listened with much interest to the discussion.

Erythema Elevatum Diutinum (?). Presented by Dr. Trimble.

I. S., aged 45, white, born in Russia, a fruit pedler, presented erythematous thickened lesions about both wrists, above the right knee and on the external surface of the right foot. These lesions and the skin about them were somewhat infiltrated. The duration of the condition was between three and four years. At first glance, it seemed that the bones at the wrist were also thickened, but probably this was not really so.

Histologic Report: A specimen showed no cellular exudate nor infiltration and no fibrosis. The epiderm showed moderate hyperkeratosis and a well marked granular layer. The only marked feature was dilatation of the blood vessels in the papillary layer. Histologic diagnosis: Erythema.

DISCUSSION

Dr. McCafferty: I agree with Dr. Bechet, except that the lesions are not usually so large. I have not seen any statement relative to the condition being symmetrical.

DR. ABRAMOWITZ: Dermatologists are seeing more and more cases of this type, and a surprise is in store when the lesion is shown to be of a syphilitic or, as recently happened, of a leukemic nature. Although of a tuberculous etiology usually, there are cases that show no definite etiology. Granuloma annulare and erythema elevatum diutinum are sometimes indistinguishable from certain types of sarcoids and probably belong to the same group. In this case there is considerable subcutaneous infiltration beneath the skin lesions, and a biopsy should include this subcutaneous tissue for examination. I favor the diagnosis of sarcoid.

DR. CLARK: I saw the case when it was presented before the New York Dermatological Society and I am no more able to make a diagnosis now than then.

DR. WISE: The histologic report was submitted with the history of the case, so that it can not be a sarcoid; the only marked feature noted in the report was the dilatation of the blood vessels; there was no cellular infiltration.

DR. MALONEY: I know that Dr. Trimble was not satisfied wtih the histologic report. The section was probably taken from the circumference of the lesion and so was not satisfactory; I shall have another section made to determine whether it will give a different report. Dr. Trimble himself considered the case an erythema elevatum and not a granuloma annulare.

LICHEN PLANUS, GENERALIZED, WITH INVOLVEMENT OF PALMS AND SOLES. Presented by DR. ABRAMOWITZ.

Louis L. (from the Vanderbilt Clinic), aged 35, was previously presented by Dr. Wise at the New York Dermatological Society. He showed typical lichen planus papules scattered over the trunk and extremities, as well as on the palms and soles.

DISCUSSION

DR. ANDREWS: Several of these cases cleared up rapidly under radicular roentgen ray treatment, though I am not sure whether the cure was due to the treatment or was merely accidental.

DR. ABRAMOWITZ: Two cases were recently reported in the Bulletin de la Société Française de Dermatologie et de Syphilolographie, in which a localized lichen planus became generalized after filtered roentgen-ray therapy to the spinal cord and its roots, a reaction comparable to the Herxheimer reaction. This tends to show that the cause of the disease is rightly placed, and also that the method of treatment is as yet far from perfect. Gouin, of Brest, is using unfiltered roentgen rays, and in smaller doses, with as good results and with no flare-ups as reported by those who used filtered treatment.

ATROPHIA MACULOSA ET STRIATA, ACRODERMATITIS CHRONICA ATROPHICANS ASSOCIATED WITH DYSTROPHIA ADIPOSOGENITALIS. Presented by DR. BECHET.

R. C., aged 21, born in the United States, came to Dr. Trimble's clinic saying that up to eight years previously he had been very thin and anemic. After several years of active camp life, he became strong and healthy. Three years previously he had developed a severe furunculosis, one furuncle occurring near the nose and causing a sinking in of the cartilaginous tissue. At about the same time he developed a severe septicemia from an infected wound in the leg, which invalided him for many months. From this period, the patient said, he rapidly became obese, gaining 50 pounds (22.7 kg.) in three years. The atrophic lines appeared at the time that the obesity became extensive. At the same time, dark, dusky red, atrophic patches appeared on the lower right leg. The Wassermann test was active.

Blood examination revealed 88 mg. of sugar in 100 c.c. of blood, 40 mg. of nonprotein nitrogen, 2.4 mg. of creatinin, 1.5 mg. of urea, and 1.6 mg. of uric acid; red blood cells, 4,000,000; white blood cells, 8,000; hemoglobin, 90 per cent.; polymorphonuclears, 76 per cent.; lymphocytes, 22 per cent., and eosinophils, 2 per cent. There was a faint trace of sugar in the urine and no albumin. The blood pressure was 200 systolic and 140 diastolic. There was some hypertrophy of the breast. The roentgen ray showed no deformity of the sella turcica.

DISCUSSION

DR. LEVIN: Most cases of acrodermatitis atrophicans show some of the stigmas of endocrine disturbance; one case showed marked pituitary disorder.

DR. ABRAMOWITZ: Am I correct in understanding that Dr. Bechet believes the atrophy on the boy's skin is that of acrodermatitis chronica atrophicans?

DR. WISE: I agree with the diagnosis as presented, but the characteristic features of acrodermatitis chronica atrophicans, with its distinct clinical picture, are absent in this patient.

DR. BECHET: I am glad to have Dr. Wise's opinion as to the acrodermatitis, as his experience has been wide; yet on the patient's right thigh and leg are dusky red atrophic patches, with a skin so thinned that the veins are readily apparent; this so fits my conception of the picture of acrodermatitis that I included that syndrome in the diagnosis. I agree with Dr. Wise, however, that it is more probably a simple atrophy of the same character as that occurring on the body. The most interesting phase of the case lies in the fact that the hypopituitary state seems to depend on the septicemia which occurred three years previously. Ordinary cases of dystrophia adiposogenitalis are apparently an incident of very early life, yet the one under discussion was caused by the septicemia three years before, and began in adult life.

SYMMETRICAL GANGRENE. Presented by DR. CLARK.

E. McG., aged 65, born in Ireland, a night-watchman, for many years had had corns on both little toes, which became so painful that he could scarcely walk. He began to paint them with "Freezone" (salicylated collodion), and a few weeks later (in December, 1923) he first noticed small ulcers on the lateral part of the plantar surface of each foot. These ulcers remained about the same for six months until July, 1924, when he observed that they were spreading over the dorsum of each foot. Pain and burning were constantly present.

On admission to the Skin and Cancer Hospital, Dec. 5, 1924, he presented the appearance of a somewhat emaciated and anemic old man, with essentially negative findings except for symmetrical gangrenous ulcers on the dorsum of each foot, extending from the metatarsophalangeal joints to the lower end of the tibia. There was no gangrene of the toes. Pulsations could not be felt over the dorsalis pedis arteries, but the posterior tibials were palpably pulsating.

There was no improvement under rest, local applications and extensive antisyphilitic treatment over a period of six months. Under local treatment with boric acid wet dressings and Kromayer light, the patient obtained temporary relief only. As the ulcers continued to spread in spite of every known method of treatment, and the deep gangrenous slough could not be made to separate, Dr. Clark requested Dr. McWilliams to see the patient in consultation regarding the desirability of peri-arterial sympathectomy. The operation was performed under local anesthesia, by Dr. McWilliams, on Jan. 15, 1925. Incision was made over

the left femoral artery, 2 inches (5 cm.) below Poupart's ligament. The artery was exposed for a distance of 4 inches (10 cm.); it was thickened and sclerosed. While the sheath was being stripped from the artery, a small stream of blood appeared, which increased until the artery finally ruptured. It was immediately clamped and ligated, and a small section removed. The surgeons were alarmed over the patient's condition, fearing an extension of the gangrenous process; but instead of that there was an almost miraculous cleaning up of the ulcers. Healthy granulations appeared, and the patient was entirely free from pain. Two weeks after the ligation, the surfaces of the ulcers appeared suitable for skin grafting. Thiersch grafts were taken from the thighs and applied over both ulcers, on Jan. 29, 1925, and the results were excellent.

DISCUSSION

DR. ABRAMOWITZ: The case is extremely interesting, especially from the point of treatment. The condition now presented by the patient seems to be a scleroderma; the skin is very tight, almost hidebound, and it would be interesting to know more of the appearance of the lesion before the operation. Did the man have any scleroderma before the operation, or had that condition developed since?

DR. LEVIN: I have noted the scleroderma-like skin, which is at times found in patients with arteriosclerosis. As to the question of peri-arterial sympathectomy, most physicians who have reported results claim that they did not obtain any good permanent results from the operation other than slight relief of pain. It would be interesting to know what would be the effect of the intravenous injection of a buffer solution.

DR. CLARK: I have watched the patient carefully for many months, and there has been no tendency to heal. The slough is an adherent, dense, black-looking slough, which is difficult to remove, and apparently the gangrenous process extends down to the tendon sheath. After nine months of persistent treatment along every possible line, including Kromayer light, the patient was so worn with the extreme pain that a surgeon was consulted as to whether or not a sympathectomy might give some relief. The surgeon felt that it did not promise much, but was willing to try it. The femoral artery was so brittle that it ruptured and had to be ligated, and about three fourths of an inch of it was removed for examination. One interesting feature of the case is that the patient has so remarkable a collateral circulation that he suffered almost no disturbance from the ligation of the artery; the next feature is that within twenty-four hours he had no pain, and has had none since. In five days the slough came off, leaving a granulating surface over which skin was grafted a few weeks later, the graft taking over almost the entire surface, and the sympathectomy resulted in as remarkable an improvement in the ulcer on the right leg as in the one on the leg operated on. I have seen one or two successful results in Raynaud's disease, but with Buerger's disease they have been indifferent. I am inclined to believe that there is an element of Raynaud's disease in this condition, because of the remarkable improvement after sympathectomy.

ERODED CHANCRE. Presented by DRS. PAROUNAGIAN and MASON.

A young man, aged 18, presented a balanitis-like condition of the coronary sulcus and prepuce, which was of four days' duration. He had been exposed two weeks previously. Dark-field examination was positive. A Wassermann specimen had been taken, but had not yet been reported on.

TUBERCULOSIS (?). Presented by DR. MALONEY.

G. C., a white girl, aged 17, born in the United States, a hosiery packer, presented three nodules: one on the right thumb, one on the left index finger and the third on the ulnar side of the left hand. These nodules were about 2 cm. by 1 cm. in size, and were a dusky red, the redness fading on pressure. They had a few small depressions on their surfaces. The Wassermann test was negative. The tuberculin skin test was positive.

DISCUSSION

DR. MCCAFFERTY: The condition resembles erythema elevatum diutinum. The periphery is elevated and erythematous, whereas the center is depressed.

DR. ROSTENBERG: It is interesting to compare this case with that shown as erythema elevatum diutinum; one of the lesions very much resembles those in that case, and the other looks like granuloma annulare. In my opinion, they belonged to the group of the tuberculids.

DR. WOLF: I cannot make any diagnosis, and I do not know in what classification to put the case; I do not know whether it is a sarcoid or a lupus pernio. It seems to belong to the general group of tuberculids.

DR. LEVIN: I disagree with the diagnosis of either erythema elevatum diutinum or sarcoid. The lesions are hard and seem to be connected with the bone; probably a roentgen-ray examination would show a connection of the hard mass with the bone. I consider it a form of tuberculosis of the skin, possibly bone tuberculosis.

DR. MALONEY: We thought the case was one of tuberculosis; the patient objected to a biopsy, but that was the only diagnosis that seemed to fit the case. The lesions are infiltrated and there are several small ulcerations on some of them. I do not know whether it is a sarcoid or not.

NEVUS VERRUCOSUS. Presented by DR. MALONEY for DR. ROTHWELL.

Beatrice L., aged 12 years, white, born in the United States, presented the remains of a nevus verrucosus, showing the result of roentgen-ray treatment. The condition was first noticed by the mother when the child was 2 months old. It began as a warty growth, about the size of a bean, behind the right ear, gradually extending on the right side of the neck down over the clavicle and on to the upper part of the right chest. When first seen at the clinic on July 7, 1923, the growth covered the area described, was warty in appearance, and showed several superficial ulcerations resulting from treatment. She had also a generalized psoriasis. This was treated by local applications, and entirely disappeared by Jan. 23, 1924. Treatment of the nevus by the roentgen rays was begun on Jan. 30, 1924, using a dose of 2 skin units, unfiltered, at intervals of two weeks for three doses; then, at intervals of from three to four weeks, doses of from 1 to 1½ skin units were given, with the result shown. Different areas were irradiated at each treatment.

DISCUSSION

DR. SCHEER: The patient was formerly treated at the Vanderbilt Clinic, and the lesions on the neck had been treated with carbon dioxid snow. It was a good case in which to compare the roentgen ray and the carbon dioxid snow treatments. Where the radiation was used, there was a chronic roentgen-ray dermatitis. I think the carbon dioxid snow is to be preferred.

DR. ROSTENBERG: I think that endothermy would have given better results, besides being very much quicker; whereas it took a year to cure the lesions with the roentgen rays, two or three coagulation treatments would have been sufficient.

DR. ANDREWS: In some of the cases at the Vanderbilt Clinic endothermy has given excellent results, better than either the roentgen ray or carbon dioxid snow. The process is much quicker, and there is little scarring. Complete treatment for a large nevus should not be attempted at one sitting, but it should be divided into several sittings to obtain the best cosmetic result.

DR. WOLF: The result of the roentgen-ray at the present time was much better than that obtained with the carbon dioxid snow, if the telangiectatic process did not go any farther; the cosmetic appearance was better. I object to the frequency of the treatments and to the fact that no filtration is used. Perhaps with filtration the telangiectasis might have been avoided; nevertheless, the result is gratifying.

DR. LEVIN: I treated one patient at the Cornell Clinic with the roentgen rays and obtained a good cosmetic result, but in most cases better results can be obtained with endothermy.

DR. SIMPSON: In my experience endothermy and coagulation therapy has been a great saver of time and expense to the patient and physician in these cases. There is not the risk of getting the telangiectasis when one destroys these hypertrophic and fungating lesions with heat instead of roentgen rays. The result in this case is excellent, but I expect to see more telangiectasia later; one must wait two or three years to see what the end-results will be. One objection to the use of carbon dioxid and coagulation for lesions in this locality is the tendency to keloids in the wounds. I have seen some instances of this and they were always most troublesome to both patient and physician. The way to obviate this is to reserve the roentgen-ray therapy until the hypertrophic lesions are destroyed by coagulation, then use the filtered roentgen rays in half or three-quarter skin doses. This will give quicker results, there will be no telangiectasis, nor will keloids develop in the wound.

DR. WISE: In two types of lesions I have had no results with the roentgen rays, filtered or unfiltered—in the tumors of von Recklinghausen's disease and in verrucous nevus. Endothermy is ideal for the latter.

DR. POLLITZER: There is another method now falling into innocuous desuetude, rather unfortunately: the use of the instrument known as the curet, which is useful in many of these conditions of the skin. It is simple and effective in cases of verrucous nevus, and as good as any other treatment.

DR. BLOSSER: Are not the cosmetic results just as good with the curet as with electric coagulation?

A CASE FOR DIAGNOSIS (DERMATITIS HEMOSTATICA OR POIKILODERMA VASCULARE ATROPHICANS). Presented by DR. ROSTENBERG.

Mrs. B., aged 64, an American, who had three healthy living children and who has had three miscarriages, had a condition that started six months before with severe pain in the legs on standing. Her occupation obliged her to stand a great deal.

Her Wassermann test was negative. Examination showed deep-seated varicose veins on the right leg. The skin of the lower two thirds of the limb was difusely red, more so in the center than on the periphery. Throughout there were a large number of bright red punctae of various sizes, "cayenne pepper," and also a great number of irregular telangiectasis. In the center there

were some small bright red excrescences which appeared to be surrounded by atrophic bands of grayish colored skin. There seemed to be a serous discharge from the lesion, covering the skin as a thin brownish crust, which could be easily removed. There was a smaller similar patch on the left leg, but not so marked as on the right; the rest of the skin was normal.

DISCUSSION

DR. MCCAFFERTY: I do not agree with the diagnosis of poikiloderma, although the case simulates that condition to a certain extent. In poikiloderma, the three characteristic findings are atrophy, pigmentation and telangiectasia. This case presents evidences of atrophy and pigmentation, but no telangiectasia. The redness is due to purpuric spots which do not disappear on deep pressure.

DR. SCHEER: I agree with Dr. McCafferty in rejecting the diagnosis of poikiloderma. It seems to be a case of dermatitis with varicose veins. As far as dermatitis hemostatica is concerned, that seems a rather obscure term, and there is no agreement on just what is meant by it. I have seen dilated capillaries or telangiectasia in dermatitis from many causes.

DR. LEVIN: I saw the patient at Mount Sinai Hospital where the case caused quite a discussion. At that time the appearance was different. There was a distinct shiny gloss, such as seen in roentgen-ray burns, and seemed to be a poikiloderma. There were distinct telangiectases, cayenne-pepper spots and angiomas, but no ring formation. It also suggested angioma serpiginosum. As presented, however, the appearance of the lesions is that of dermatitis hemostatica, and I believe that is the correct diagnosis.

DR. WISE: I had the opportunity to examine the patient in daylight a few weeks ago. I believe that the condition closely corresponds to that described more than twenty-five years ago by Dr. Klotz under the title of dermatitis hemostatica.

DR. ROSTENBERG: I have observed the case for six or seven months. There was no ulceration on the leg when I first saw the patient. She had varicose veins and an almost similar lesion to that shown now, only not so severe. My first impression was that it was a case of dermatitis hemostatica, but not having a clear impression of what was meant by that term she was sent to Mount Sinai, where various diagnoses were made. I still cannot understand why she should show this severe atrophy and these papular excrescences which show the glossy appearance much better in daylight than at night. I am inclined, however, to the diagnosis of dermatitis hemostatica, but I am not absolutely sure of it.

RADIODERMATITIS FOLLOWING TREATMENT WITH ROENTGEN RAY FOR SUPERFLUOUS HAIR. Presented by DR. WISE for DR. FORDYCE.

Mrs. L. B., aged 30, applied to a local physician about three years previously for the removal of hair from the cheeks, chin and neck, and received between thirty and forty exposures, once or twice weekly. The last treatment was given about one year before presentation.

As presented, both cheeks showed a roughly circular area of pigmentation about 2 inches (5 cm.) in diameter, with faint superficial telangiectases. The skin was dry and wrinkled in these areas. On the neck, just below the chin, there was an inflamed area about half an inch (1.2 cm.) in diameter, surrounded by a ring of dilated blood vessels and covered with adherent crusts, which on removal caused bleeding.

RADIODERMATITIS OF FACE FOLLOWING TREATMENT WITH THE ROENTGEN RAY FOR SUPERFLUOUS HAIR. Presented by DR. WISE for DR. FORDYCE.

Miss R. C., aged 25, applied for treatment at the office of a local physician, and received between twenty and thirty treatments during a period of two years. She presented areas of atrophy, wrinkling and telangiectasia of the entire upper lip, the entire chin and the prominent portions of both cheeks over the malar eminences. Just under the chin on the neck was an area of thickened and inflamed skin which was somewhat scaly and traversed by dilated blood vessels.

XANTHOMA TUBEROSUM. Presented by DR. MALONEY for DR. TRIMBLE.

Kate McK., aged 64, white, a widow, born in the United States, presented yellowish nodules on the forearms and one over the upper end of the anterior surface of the tibia. The condition began twelve years ago, at which time she also had had a similar nodule on the forehead, which had been removed surgically.

XANTHOMA DIABETICORUM. Presented by DR. MALONEY for DR. TRIMBLE.

Marie R., aged 48, married, born in Germany, presented several small, pea-sized, yellowish discrete papules on the external surfaces of the forearms about the elbows. When first seen at the clinic, March 31, 1924, she had great numbers of papules similar to those on the forearms and about the knees, which had appeared three months previously. Blood sugar examinations showed 360 mg. of sugar in 100 c.c. of blood; the urine showed 1 per cent. sugar. She was put on antidiabetic treatment and diet. The lesions gradually faded, and those about the knees disappeared almost entirely.

Histologic examination showed corium infiltration, with large cells containing fine globules of fat (xanthoma cells).

DISCUSSION

DR. BECHET: Has any one had any experience in the treatment in such cases with insulin?

DR. ABRAMOWITZ: In a recently published report a cure was claimed.

DR. POLLITZER: Patients treated with insulin are practically always put on an antidiabetic diet.

DR. MCCAFFERTY: Dr. Major of Kansas City recently treated three patients with insulin; nearly all the lesions cleared up. Major believes that the contents of these lesions is mostly cholesterin, and therefore it is more important to reduce the cholesterin than the sugar content of the blood.

LUPUS VULGARIS (EXTENSIVE, WITH COLLIQUATIVE AND TUMID LESIONS). Presented by DR. THORNLEY.

Mrs. B. N., aged 41, born in Austria, a housewife, had had three children; one had recently died of tuberculosis, the others were well. As a child, she had tuberculosis of the glands, the scar from which still showed on the right side of her neck. She was in good health until three years before presentation, when the eruption first appeared and spread over her body. The most striking lesion was on the face, situated in the middle of the forehead, extending from the hair line down on to the nose. The whole face was swollen and disfigured. The alae were raised almost an eighth of an inch above the level of the adjacent skin, were reddish-purple, somewhat nodular and showed little or no tendency to cicatrization in the center or elsewhere. No lupomas could be found, but there was marked

sensibility to touch. The process had also marked the throat, where ulcerative lesions were present. Similar lesions were present on various parts of the body, especially one on the back, from which the biopsy was made. The biopsy report was lupus vulgaris. Wassermann tests, according to the patient, were negative.

DISCUSSION

DR. POLLITZER: I accept the diagnosis of tuberculosis of the skin without question, but, referring to the clear hemispheric nodules on the face giving the appearance of translucence. I have never before seen any tuberculous lesions of that kind. My first impression was that it might be a case of leprosy, but the absence of any other clinical evidence, and certainly with the definite diagnosis of tuberculosis on other lesions, there was a natural tendency to associate all the lesions under one head, and one would hesitate to make the diagnosis of leprosy; but it would be advisable to have an examination of one of these lesions, and it would not be astonishing to find the lepra bacillus. The woman came from Galicia, where lepra is not unknown, and she might well have that disease. In my experience, lesions of this kind are not characteristic of tuberculosis, and I should like to have it proved that they are tuberculous.

DR. WOLF: I agree with Dr. Pollitzer in suspecting leprosy, it seems to me that there is a leonine facial expression. As for lupus tumidans, I have never seen such an extensive case as this. It might be easy to determine whether it is a case of leprosy from the examination of the nasal secretion.

DR. ROSTENBERG: Judging from the nodules on the face, my first impression was that it was a case of leprosy; but of course such a case would have to be studied thoroughly. In the meantime, I am willing to accept the diagnosis as presented.

DR. BECHET: The lesions on the face are not the subcutaneous infiltrations usually seen in leprosy; they are situated rather on top of the skin than beneath it, and are rounded rather than sharply marginated. In my opinion they are strongly suggestive of the tumid variety of lupus vulgaris, and I am inclined to agree with the diagnosis as presented.

DR. POLLITZER: Against the diagnosis of leprosy is the fact that the patient does have a leonine face. There is no loss of eyebrows, no infiltration of the forehead or the ear lobule, and none of the characteristic lesions that go to make up the picture; from that point of view, I would say that it is not leprosy.

DR. ABRAMOWITZ: This case brought out the fact that in this country we do not see all the different types of skin tuberculosis. The patient gave a very intelligent history. The patient had a tuberculous adenitis as a child, and the scars on the side of the neck verified that. She had also lost a girl of 17 years from primary tuberculosis, so the history in the family was definite. Any dermatologist seeing the lesions on her buttocks would venture the diagnosis of lupus vulgaris, although the lesions were of four years' duration and a little too boggy. It is true also that no apple-jelly nodules are present, and yet this is no uncommon occurrence and can be explained in this case by the fusion and edema of the lupus nodules. To be exact, it is more of a colliquative tuberculosis or scrofuloderma. Another odd feature is the peculiar soft tumors present, particularly on the face and neck, and yet a biopsy from one of these lesions showed a typical lupus structure. The patient has been taking potassium iodid irregularly until seven months ago, but the lesions have not improved since then; in fact, they are worse.

Dr. Pollitzer's suggestion of leprosy will be considered and tests made, although I am convinced that the patient does not have leprosy. Dr. Thornley has referred this case to the clinic, and he might add something to the discussion.

Dr. Thornley: Dr. Abramowitz has said all there was to be said. The Wassermann tests were reported negative; the possibility of leprosy was entertained, but sufficient evidence was lacking. The history is probably in favor of tuberculosis. I agree, however, that the question has not yet been settled.

Note.—The Wassermann test was again reported negative, and nasal smears were negative for Hansen's bacillus.

Blastomycosis. Presented by Dr. McCafferty.

J. P., a laborer, aged 54, born in Italy but who had lived in the United States for twenty years, presented himself to the service of Dr. Dillingham at the New York Polyclinic Hospital on Dec. 10, 1924. At that time he had an eruption involving the dorsal surfaces of both hands, the flexor surfaces of the forearms and the lateral surfaces of the cheeks, with numerous plaques scattered over the chest, back and legs. The lesions were characterized by a proliferating papillomatous mass studded with numerous abscesses which resembled sinuses. A foul-smelling, yellowish pus exuded from these sinuses. Over some of the lesions, particularly those on the back, was a thick crust which when removed revealed a red, granulating and elevated lesion containing much pus. Cultures were made, and bodies resembling blastomyces were seen. A biopsy was made, and showed a dense cellular infiltration with minute abscesses, but no blastomyces were found. The patient was placed on a course of 10 drops of potassium iodid three times a day, and within two months the eruption had completely healed, leaving atrophic areas. This atrophy, due to degeneration of tissue, was so pronounced on the dorsal surfaces of the hands that the patient was unable to close his fists.

After two months of therapy, there was only one small lesion left on the right knee, which was similar in every respect to the former lesions. On general physical examination, nothing abnormal was found. The Wassermann test was negative. Recent examination of the unstained tissue, which was treated by sodium hydroxid, had revealed the blastomyces.

DISCUSSION

Dr. Parounagian: I saw the patient several months ago, and had made a diagnosis of blastomycosis. Microscopic diagnosis, however, failed to confirm the diagnosis. I photographed the patient during the active stage of the disease. I am pleased to see the improvement.

Dr. Andrews: Clinically, it seems to be a case of blastomycosis. The deep pustular crusted lesion on the knee suggests that diagnosis, as does also the warty lesions on the face.

Dr. Chargin: I had the patient under my care at the Mount Sinai Clinic some months before, and my first diagnosis was blastomycosis, but because of the deep pustular lesions on the forearm, sporotrichosis was also considered. The microscopic examination on several occasions proved negative, nor were inclusion bodies found in the biopsy. The Wassermann test was negative on two occasions. The patient was given potassium iodid, 60 grains (3.8 gm.) a day, without any apparent improvement. He was about to be admitted to the hospital for further study, when he disappeared from observation.

LUPUS VULGARIS OF FOREHEAD AND SCROFULODERMA OF NECK. Presented by DR. ANDREWS.

V. C. (from the Vanderbilt Clinic), aged 3½ years, presented a lesion at the angle of the left jaw 1½ inch (3.7 cm.) in diameter, having a thick yellowish crust, surrounded by an inflammatory base for about three eighths of an inch outside of the crust, the entire lesion being raised three eighths of an inch (0.9 cm.) above the skin. There was a history of starting with a red, much smaller, lesion, which during the past two and a half years continuously discharged yellowish pus. Over the left eyebrow was a depressed scar, half an inch in length, with an inflammatory zone at one end. The father stated that the lesion occurred there one month ago, leaving the scar. On removing the crust at one side of the lesion, it bled profusely.

The patient had received roentgen-ray therapy and various light treatments by a private physician.

PARAPSORIASIS. Presented by DR. BECHET.

J. J., a man, aged 50, born in the United States, who presented himself at Dr. Whitehouse's clinic, said that the lesions had been present for seven years and had undergone no change. There were no subjective symptoms. Scattered over the trunk were the characteristic superficial, slightly scaly plaques of the Brocq type of the disease.

OSCAR L. LEVIN, M. D., Secretary.

Index to Current Literature

DERMATOLOGY

Abrasions. T. M. Rivers, Florida M. A. J. **12**:10 (July) 1925.

Actinomycosis After Injuries to the Head. A. Christ, Schweiz. med. Wchnschr. **55**:643 (July 9) 1925.

Actinomycosis of Nasopharynx and Soft Palate. G. W. Montgomery, Northwest Med. **25**:344 (July) 1925.

Actinomycosis of the Skin: One Case. M. Truffi, Riforma med. **41**:337 (April 13) 1925.

Acute Dermatitis Among Painters Employed in Industrial Plants. J. A. Turner, J. Indus. Hygiene **7**:293 (July) 1925.

Acute Exanthemata. W. A. Bagby, Iowa State M. S. J. **15**:377 (July 10) 1925.

Acute Lupus Erythematodes. H. W. Siemens, München. med. Wchnschr. **72**:1023 (June 5) 1925.

Agar-Vaccines in Treatment of Skin Diseases. Jausion and Diot, Compt. rend. Soc. de biol. **92**:1497 (June 5) 1925.

Agranulocytic Angina. J. A. Moore and H. S. Wieder, J. A. M. A. **85**:512 (Aug. 15) 1925.

Agranulocytosis. R. Bantz, München. med. Wchnschr. **72**:1200 (July 17) 1925.

Alastrim: Attenuated Smallpox. A. Netter, Bull. de l'Acad. de méd. **93**:723 (June 30) 1925.

Alastrim. A. Plehn, Klin. Wchnschr. **4**:1264 (June 25) 1925.

Alastrim. P. Teissier, Bull. de l'Acad. de méd. **94**:756 (July 7) 1925.

Alastrim and Variola. W. H. Hofmann, Deutsch. med. Wchnschr. **51**:1154 (July 10) 1925.

Antivenin for Spider Bites. Vital Brazil and J. Véllard, Brazil-med. **1**:249 (May 16) 1925.

Atypical Rash in Measles. E. Moro and E. Muller, Jahrb. f. Kinderh. **109**:127 (July) 1925.

Autohemotherapy in Eczema. A. Mazzeo, Pediatria **33**:700 (July 1) 1925.

Biochemical Import of Freckles. B. Coglievina, Riforma med. **41**:581 (June 22) 1925.

Blood Platelets in Scarlet Fever. O. T. Bonciu, Compt. rend. Soc. de biol. **92**:1453 (May 29) 1925.

Burt Lake Itch; Skin Eruption of Unknown Cause in Northern Michigan. W. E. Forsythe, Michigan State M. S. J. **24**:350 (July) 1925.

Cancer in Scars. F. Bang, Hospitalstidende **68**:415 (May 7) 1925.

Case of Kala-Azar in Adult. E. Burnet and F. Masselot, Bull. et mém. Soc. méd. d. hôp. de Paris **49**:899 (June 12) 1925.

Case of Lupus Disseminatus. H. Sundt, Brit. J. Dermat. & Syph. **37**:316 (July) 1925.

Case of Tuberculosis Verrucosa of Perianal Region. M. D. Shie, Ohio State M. J. **21**:491 (July) 1925.

Catarrhal Icterus and Icterus After Arsphenamin. H. Ruge, Ztschr. f. klin. Med. **101**:684 (June 24) 1925.

Chickenpox Succeeding Herpes Zoster. A. Panayotatou, Bull. et mém. Soc. méd. d. hôp. de Paris **49**:1002 (June 26) 1925.

Conservative Treatment of Furuncles. Canon, Deutsch. med. Wchnschr. **51**:951 (June 5) 1925.

Convalescents' Serum in Scarlet Fever. T. Pontano, Policlinico **32**:265 (June 1) 1925.

Diagnosis of Scarlet Fever. G. Fanconi, Schweiz. med. Wchnschr. **55**:529 (June 4) 1925.

Discoloration of Skin and Nails by Vegetable Products. K. Pichler, Wien. Arch. f. inn. med. **10**:569 (June 15) 1925.

"Ecthyma" as Menace Against Smallpox Vaccination. A. Gupta, Calcutta M. J. **20**:432 (May) 1925.

Epitheliomas in Sebaceous Cysts. H. D. Caylor, Ann. Surg. **82**:164 (July) 1925.

Erysipelas and Diabetes. G. Peco, Rev. de la Soc. de med. interna **6**:14 (May) 1925.

Erysipelas. L. Kubin, Med. Klin. **21**:1046 (July 10) 1925.

Erythema Nodosum. E. P. Weber, Brit. J. Child. Dis. **22**:133 (April-June) 1925.

Etiology of Epidemic Encephalitis and Herpes. C. Levaditi, Paris méd. **55**: 573 (June 27) 1925.

Etiology of Exanthematic Diseases. M. B. Sindoni, Deutsch. med. Wchnschr. **51**:945 (June 5) 1925.

Etiology of Scarlet Fever, The Di Cristina and Caronia, Pediat. Arch. **1**:3, 1925.

Etiology of Sclerodermia. W. Heimann-Hatry, Med. klin. **21**:1082 (July 17) 1925.

Glanders. E. Zeman and V. Tomásek, Časop. lék. česk. **64**:1032 (June 20) 1925.

Herpes Zoster and Varicella. A. Netter, Bull. et mém. Soc. méd. d. hôp. de Paris **49**:998 (June 26) 1925.

Histology of Xeroderma Pigmentosum. M. Edgren-Gylling, Finska lak.-sallk. handl. **67**:542 (June) 1925.

Hodgkin's Disease of Skin. B. Shelmire, South. M. J. **27**:511 (July) 1925.

Induced Cutaneous Allergy. E. Moro and W. Keller, Deutsch. med. Wchnschr. **51**:1015 (June 19) 1925.

Intentional Exposure to Measles. Armaingaud, Bull. de l'Acad. de méd. **93**:607 (June 2) 1925.

Intracutaneous Reaction in Malta Fever. E. Trenti, Policlinico **32**:767 (June 1) 1925.

Iritis with Herpes Zoster. Rollet, Lyon méd. **135**:715 (June 14) 1925.

Itching Skin Symptoms of Systemic Disease. W. H. Goeckerman, M. J. & Rec. **122**:83 (July 15) 1925.

Leper Island of Culion and Antileprosy Work in Philippine Islands. E. Muir, Indian M. Gaz. **60**:261 (June) 1925.

Leprosy, Two Cases of. G. Delamare, Progrès méd., p. 895 (June 13) 1925.

Leprosy at U. S. Naval Hospital, Great Lakes, Ill.; Case. P. Richmond, Jr., U. S. Nav. M. Bull. **23**:25 (July) 1925.

Local Freezing Treatment in Dermatology. P. Legrain, Bull. méd., Paris **39**:618 (May 30) 1925.

Lupus Erythematodes with Erythema Centrifugum. W. Richter, München. med. Wchnschr. **72**:1026 (June 19) 1925.

Myeloid Myeloma. S. Moore, Radiology **5**:18 (July) 1925.

Nervous Complications of Varicella. P. Galli, Pediatria **33**:681 (July 1) 1925.

Neutral Salt Reactions in Skin. S. Bommer, Klin. Wchnschr. **4**:1208 (June 18) 1925.

New Pharmacopeia, The. J. A. M. A. **85**:678 (Aug. 29) 1925.

Nonspecific Skin Test Reactions. R. Khàrina-Marinucci, Pediatria **33**:627 (June 15) 1925.

Parasitic Eczema. R. Boenke, M. J. & Rec. **122**:91 (July 15) 1925.

Pelvic Actinomycosis in Soldier. W. M. Brickner, Mil. Surg. **57**:39 (July) 1925.

Peritonitis Following Migrating Erysipelas. G. Karehnke, Zentralbl. f. Chir. **52**:1466 (July 4) 1925.

Pharmacology of Dermatologic Remedies. S. K. Mayer, Deutsch. med. Wchnschr. **51**:967 (June 5) 1925.

Plea for Immunotherapy in Kala-Azar. S. L. Rodrigues, Calcutta M. J. **20**:421 (May) 1925.

Pruritus Ani. C. Goldman, M. J. & Rec. **122**:88 (July 15) 1925.

Purpura Hemorrhagica with Splenectomy. D. L. Farley, Am. J. M. Sc. **170**:10 (July) 1925.

Quartz Lamp in Psoriasis. J. H. Swartz, Boston M. & S. J. **193**:162 (July 23) 1925.

Relapses in Measles. I. H. Goldberger, Am. J. Dis. Child. **30**:55 (July) 1925.

Relation Between Herpes Zoster and Varicella. M. Petzetakis, Bull. et mém. Soc. méd. d. hôp. de Paris **49**:1000 (June 26) 1925.

Research on the Sympathetic: Emotional Erythem, etc. M. R. Castex and A. F. Camauer, Prensa méd. Argentina **11**:1185 (May 30) 1925.

Rhus Dermatitis: Treatment with Poison Ivy Extract. R. O. Clock, M. J. & Rec. **122**:93 (July 15) 1925.

Scabies in Infants. Wolf, München. med. Wchnschr. **72**:1157 (July 10) 1925.
Scabies; Paleontology of Acarus. G. Pernet, Brit. J. Dermat. & Syph. **37**:312 (July) 1925.
Scarlet Fever, Diphtheria and Measles at Willard Parker Hospital, 1924. H. Emerson, Am. J. Pub. Health **25**:590 (July) 1925.
Scarlet Fever Question, The. S. Zlatogoroff, Prophylak. med., Charkoff **4**:13 (April) 1925.
Sclerodermia in Childhood. A. Kraus, Med. Klin. **21**:921 (June 19) 1925.
Scurvy. C. Pestalozza, Pediatria **33**:718 (July 1) 1925.
Severe Generalized Dermatitis After Local Scald. R. Roche, Brit. M. J. **2**:60 (July 11) 1925.
Skin Capillaries in Scleroderma. G. E. Brown and P. A. O'Leary, Arch. Int. Med. **36**:73 (July 15) 1925.
Skin Eruption from Luminal Caussade et al., Bull. et mém. Soc. méd. d. hôp. de Paris **49**:1042 (July 3) 1925.
Skin Flap Methods in Upper Extremity. A. Steindler, J. Bone & Joint Surg. **7**:512 (July) 1925.
Skin Test for Immunity to Smallpox. S. B. Hooker, Boston M. & S. J. **193**:212 (July 30) 1925.
Smallpox Epidemic in Switzerland, The. A. Alcay, Bull. de l'Acad. de méd. **93**:739 (June 30) 1925.
Splenectomy in Thrombopenic Purpura. B. Vincent, Boston M. & S. J. **193**:191 (July 30) 1925.
Studies on Endothelial Reactions. Formation of Reticulum in Lesions of Experimental Tuberculosis in Rabbits. N. C. Foot, Am. J. Path. **1**:341 (July) 1925.
Sun Rays and Symptoms in Rickets. W. Lasch and M. Miemietz, Jahrb. f. Kinderh. **109**:134 (July) 1925.
Susceptibility to Skin Diseases. G. D. Culver, California & West. Med. **23**:842 (July) 1925.
Technic of Splenic Puncture in Diagnosis of Kala-Azar. P. Manson-Bahr, Lancet **2**:70 (July 11) 1925.
Ten Years of Radium Therapy of Skin Diseases. Möbius, Med. Klin. **21**:967 (June 26) 1925.
Three Cases of Tularemia, One Resembling Sporotrichosis. F. C. Hodges, Am. J. M. Sc. **170**:57 (July) 1925.
Transmission of Smallpox by Imported Rags, etc. L. Camus, Bull. de l'Acad. de méd. **94**:767 (July 7) 1925.
Transplantation of Distant Skin Flaps for Cure of Intractable Basal Cell Carcinoma. J. S. Horsley, Ann. Surg. **82**:14 (July) 1925.
Trauma and Herpes Zoster Virus. Le Fèvre de Arric and Millet, Compt. rend. Soc. de biol. **93**:45 (June 12) 1925.
Treatment of Acne by Combined Use of Roentgen-Ray and Mercury Quartz Light. E. F. Traub, M. J. & Rec. **122**:90 (July 15) 1925.
Treatment of Furuncles. J. Schutz, München. med. Wchnschr. **72**:988 (June 12) 1925.
Treatment of Pityriasis Rosea with Ultraviolet Light, J. C. Michael, South. M. J. **27**:519 (July) 1925.
Treatment of Purpura Hemorrhagica by Roentgen-Ray Irradiation of Spleen. H. K. Pancost, E. P. Pendergrass and T. Fitz-Hugh, Am. J. Roentgenol. **13**:558 (June) 1925.
Treatment of Roentgen-Ray Ulcers. F. Veiel, Klin. Wchnschr. **4**:1456 (July 9) 1925.
Treatment of Tropical Ulcer. J. F. James, Indian M. Gaz. **60**:274 (June) 1925.
Treatment of Tumors of Skin. A. Burrows, Brit. J. Radiol. **30**:269 (July) 1925.
Trophic Changes and Desquamative Erythrodermia. Malossi, Riv. di clin. pediat. **23**:361 (June) 1925.
Tuberculin Skin Reaction. H. Toxopeus, Nederlandsch. Tijdschr. v. Geneesk. **1**:2953 (June 27) 1925.
Ursol Eczema. A. Buschke and H. Ollendorff, Klin. Wchnschr. **4**:1162 (June 11) 1925.
Use of Dental Stent in Skin Grafts of Middle Ear and Mastoid Cavities. J. P. deRiver, M. J. & Rec. **22**:63 (July 15) 1925.

Vaccine Prevention of Scarlet Fever. G. de Toni, Policlinico **32**:840 (June 15) 1925.

Vaccine Treatment of Staphylomycosis of Skin. M. Wolff, Deutsch. med. Wchnschr. **51**:991 (June 12) 1925.

Vaccination Against Smallpox. B. White, Boston M. & S. J. **193**:210 (July 30) 1925.

Vesicular Eruption After Meningitis. Nobécourt, et al., Bull. de l'Acad. de méd. **94**:771 (July 7) 1925.

Yaws (Frambesia) in Chin Hills. P. Bell, Indian M. Gaz. **60**:259 (June) 1925.

"Zoster and Varicella." Léri, Bull. et mém. Soc. méd. d. hôp. de Paris **49**:1011 (July 3) 1925.

SYPHILOLOGY

Adequate Treatment for Hereditary Syphilis. F. S. Schoonover, Texas State J. Med. **21**:199 (July) 1925.

Auxiliary Symptoms of Scarlet Fever. L. Sabatini, Pediatria **33**:656 (June 15) 1925.

Bismuth in Treatment of Syphilis. G. J. Muellerschoen, M. J. & Rec. **122**:97 (July 15) 1925.

Case of General Paralysis with Miliary Gummas. F. d'Hollander and T. Rubbens, Encéphale **20**:301 (May) 1925.

Case of Tertiary Syphilis of the Thyroid. Groedel and Hubert, Schweiz. méd. Wchnschr. **55**:674 (July 16) 1925.

Causes of Severe Syphilitic Lesions. J. Whittenberg, M. J. & Rec. **122**:94 (July 15) 1925.

Cholesterol of Wassermann and Sachs-Georgi Antigens. Frank, Wien. Arch. f. inn. Med. **10**:357 (May 15) 1925.

Colitis Due to Arsphenamin Poisoning. Bonnet and Bouvier, J. de méd. de Lyon **6**:295 (May 20) 1925.

Colloidal Benzoin Curve in Cerebrospinal Fluid. W. W. Payne, J. Neurol. & Psychopath. **6**:27 (May) 1925.

Colloidal Gold Reaction, The. H. A. Krebs, Klin. Wchnschr. **4**:1309 (July 2) 1925.

Congenital Syphilis. E. Slawik, Med. Klin. **21**:900 (June 5) 1925.

Congenital Syphilis and Endocrine Secretion. Buschke and Gumpert, Klin Wchnschr. **4**:1347 (July 9) 1925.

Congenital Syphilis of Larynx in Children; Case. E. G. Gill, Virginia M. Month. **52**:255 (July) 1925.

Dercum's Method of Treating Neurosyphilis. D. L. Kerlin, M. J. & Rec. **122**: 86 (July 15) 1925.

Diagnosis of Aural Syphilis. F. R. Packard, Atlantic M. J. **28**:624 (July) 1925.

Diagnosis and Differential Diagnosis of Syphilitic Conditions of Eye and Adnexa. G. H. Cross, Atlantic M. J. **28**:621 (July) 1925.

Diagnostic Value of Giant Cells in Syphilis. Favre and Manhès, J. de méd. de Lyon **6**:299 (May 20) 1925.

Diphtheria and Syphilis of the Pharynx. Rosenbaum, Med. klin. **21**:1081 (July 17) 1925.

Eruptions After Mercurous Chlorid. Korach, Deutsch. med. Wchnschr. **51**:1190 (July 17) 1925.

Essential Unity of Wassermann and Precipitation Tests. A. D. Dulaney, South M. J. **27**:491 (July) 1925.

Experimental Intravenous Use of Colloidal Bismuth. D'Amato, Semana méd. **1**:1257 (June 11) 1925.

Frequency of Unsuspected Acquired Syphilis. J. L. Carrera. Prensa méd. Argentina **11**:1211 (May 30) 1925.

Genito-Dystrophic Senile Changes in the Female Skin. Izzo, Rev. de la Soc. de med. interna **6**:24 (May) 1925.

Hutchinson's Teeth. Buschke and Langer, München. med. Wchnschr. **72**:1191 (July 17) 1925.

Infarct in Lung from Arsphenamin. F. Widal et al., Bull. et mém. Soc. méd. d. hôp. de Paris **49**:912 (June 19) 1925.

Intravertebral Treatment of Diseases of the Central Nervous System Exclusive of Cerebrospinal Syphilis. L. J. Pollock and J. Favill, Arch. Neurol. & Psychiat. **14**:66 (July) 1925.

Laryngeal Manifestations of Syphilis. F. O. Lewis, Atlantic M. J. **28**:630 (July) 1925.

Leukocytes After Recurrens Treatment in General Paralysis, The. Sagel, Ztschr. f. klin. Med. **101**:499 (June 24) 1925.

Malaria Treatment in Neurosyphilis. S. Lomholt and Johannes Norvig, Ugesk. f. Læger. **87**:504 (May 21) 1925.

Meinicke's Turbidity Reaction. Rocco, Policlinico **32**:292 (June 1) 1925.

Milk of Syphilitic Women, The. E. Martin, München. med. Wchnschr. **72**: 1205 (July 17) 1925.

Modification of Bouquet-Nègre Complement Fixation. Berliner, Deutsch. med. Wchnschr. **51**:1156 (July 10) 1925.

Modification of Kolmer Reaction. F. O. Huntsinger, J. Lab. & Clin. Med. **10**:810 (July) 1925.

Multiple Sclerosis and Syphilis. A. Sézary, Progrès méd. p. 829 (May 30) 1925.

Myeloid Degeneration of Glands in Syphilis. E. de Souza Campos, Compt. rend. Soc. de biol. **93**:32 (June 12) 1925.

Neurosyphilis with Tryparsamide Therapy. J. M. Wolfsohn, J. A. M. A. **85**: 494 (Aug. 15) 1925.

Plurality of the Antigens in the Wassermann Test in Congenital Syphilis. D. Caffarena, Pediat. Arch. **1**:78, 1925.

Possibility of Cure of Syphilis with Arsphenamin. A. M. Chesney and J. E. Kemp, J. Exper. Med. **42**:17 (July 1) 1925.

Present Status of Bismuth in Treatment of Syphilis. Giorgi, Policlinico **32**:1012 (July 20) 1925.

Rat-Bite Fever and Syphilis. Apert et al., Bull. et mém. Soc. méd. d. hôp. de Paris **49**:1080 (July 10) 1925.

Relations Between General Paralysis and Generation Phenomena. G. Susstrunk, Zentralbl. f. Gynäk. **49**:1436 (June 13) 1925.

Rheumatic, Syphilitic and Thyroid Heart. J. H. Musser, New Orleans M. & S. J. **78**:61 (Aug.) 1925.

Sedimentation Test and Congenital Syphilis. H. O. Neumann, Zentralbl. f. Gynäk. **49**:1312 (June 13) 1925.

Serodiagnostic Studies in Syphilis. R. Müller, München. med. Wchnschr. **72**:1162 (July 10) 1925.

Serodiagnosis of Syphilis. S. Levy, Med. Klin. **21**:932 (June 19) 1925.

Serodiagnosis of Syphilis. R. Otto, Klin. Wchnschr. **4**:1312 (July 2) 1925.

Serologic Tests in Retroplacental Blood. R. Knebel, Zentralbl. f. Gynäk. **49**:1302 (June 13) 1925.

Sex Frequency of Congenital Syphilis. Bratusch-Marrain, München. med. Wchnschr. **72**:1109 (July 3) 1925.

Surgical Treatment of Syphilis of Stomach. A. Pollidori, Arch. Ital. Chirurg. **11**:273 (April) 1925.

Survival of Teponema Pallidum in Internal Organs of Treated and Untreated Rabbits. A. M. Chesney and J. E. Kemp, J. Exper. Med. **42**:33 (July 1) 1925.

Syphilis from Accidents of Work. S. Diez, Policlinico **32**:775 (June 1) 1925.

Syphilis of Corpus Striatum. J. Lhermitte, Progrès méd., p. 817 (May 30) 1925.

Syphilis of the Fetus. G. Ekehorn, Acta Med. Scandinav., p. 1, 1925.

Syphilis and Gonorrhea in Obstetrics. Conrad, Med. klin. **21**:1038 (July 10) 1925.

Syphilitic Gumma of Eyelid; Case. E. B. Heckel and L. G. Beinhauer, Arch. Ophthal. **54**:352 (July) 1925.

Syphilis of Lungs; Two Cases. C. R. Grandy, Virginia M. Month. **52**:230 (July) 1925.

Syphilis of Nose and Throat. G. M. Coates, Atlantic M. J. **28**:626 (July) 1925.

Syphilis, Paralysis and Tabes. K. Wilmanns, Klin. Wchnschr. **4**:1145 (June 11) 1925.

Syphilis in Parturients. V. Marqués Bertrán and J. Munoz Arbat, Rev. españ. de Obstet. y Ginecol. **10**:201 (May) 1925.

Syphilitic Changes of Organs. Gürich, München. med. Wchnschr. **72**:980 (June 12) 1925.

Syphilitic Disease of the Intestine Plus Amebiasis and Hookworm. Cobián, Arch. españ. d. enf. del aparato digest. **8**:332 (June) 1925.

Syphilitic Fever. F. Freund, Wien. klin. Wchnschr. **38**:786 (July 9) 1925.
Syphilitic Paralysis of the Facial and Auditory Nerves. R. Becco, Semana méd. **1**:1224 (June 4) 1925.
Syphilitic Processes in the Lower Spine. K. Blum, München. med. Wchnschr. **72**:1066 (June 26) 1925.
Taste and Smell During Neo-Arsphenamin Treatment. G. Donato, Policlinico **32**:899 (June 29) 1925.
Test Treatment for Syphilis. G. Massia and M. Pilon, J. de méd. de Lyon. **6**:303 (May 20) 1925.
Therapy of Cerebrospinal Syphilis. R. Henneberg, Klin. Wchnschr. **4**:1369 (July 9) 1925.
Treatment of General Paralysis. A. Marie, Bull. et mém. Soc. méd. d. hôp. de Paris **49**:898 (June 12) 1925.
Treatment of Neurosyphilis. A. Kissmeyer, Ugesk. f. Læger. **87**:582 (June 25) 1925.
Tryparsamide Treatment of Neurosyphilis. E. W. Cocke, Tennessee State M. A. J. **18**:7 (May) 1925.
Vernes Test for Diagnosis of Syphilis. L. H. Cornwall, J. Lab. & Clin. Med. **10**:831 (July) 1925.
"Vernes' and the Wassermann Tests for Syphilis." A. Vernes, Presse méd. **33**:979 (July 22) 1925.
Wassermann-Fast Syphilitics Treated with Bismuth. L. K. McCafferty and J. A. MacGregor, Am. J. M. Sc. **170**:22 (July) 1925.
Wassermann Reaction in Blood and Spinal Fluid of Paretic Neurosyphilis. Wm. C. Menninger and K. A. Menninger, Am. J. M. Sc. **170**:27 (July) 1925.